

HISTORIC STRUCTURE REPORT

COIT TOWER SAN FRANCISCO, CALIFORNIA



Prepared For:

Arts Commission
City and County of San Francisco
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San Francisco, California 94102
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April 1989

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HISTORIC STRUCTURE REPORT

COIT TOWER SAN FRANCISCO, CALIFORNIA

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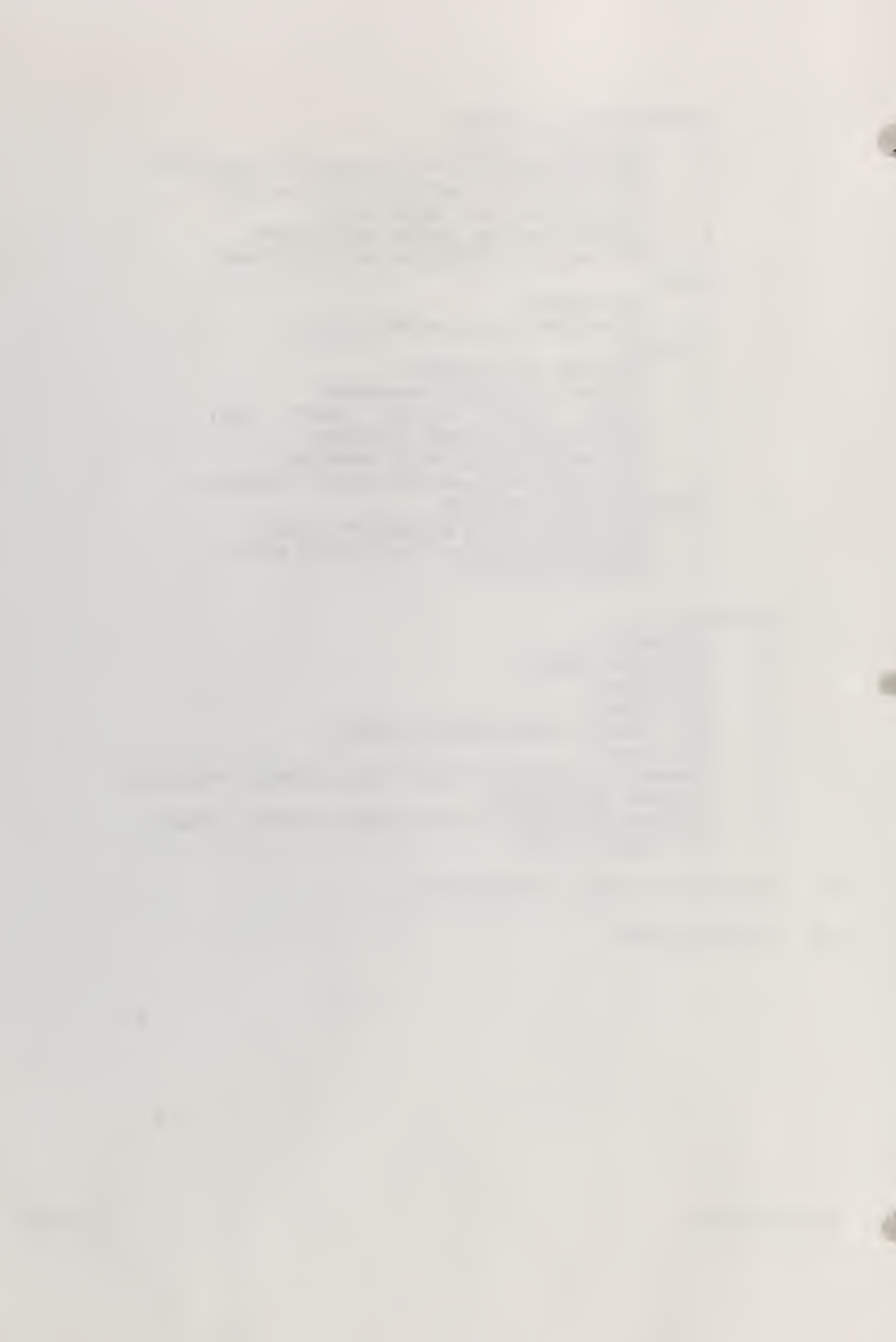
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- B. ARTHUR BROWN, JR., ARCHITECT, SCHEMATIC DESIGN DRAWINGS
- C. CITY AND COUNTY OF SAN FRANCISCO, DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING, M. M. O'SHAUGHNESSY, CITY ENGINEER
- D. ARTHUR BROWN, JR., ARCHITECT, ARCHITECTURAL DRAWING
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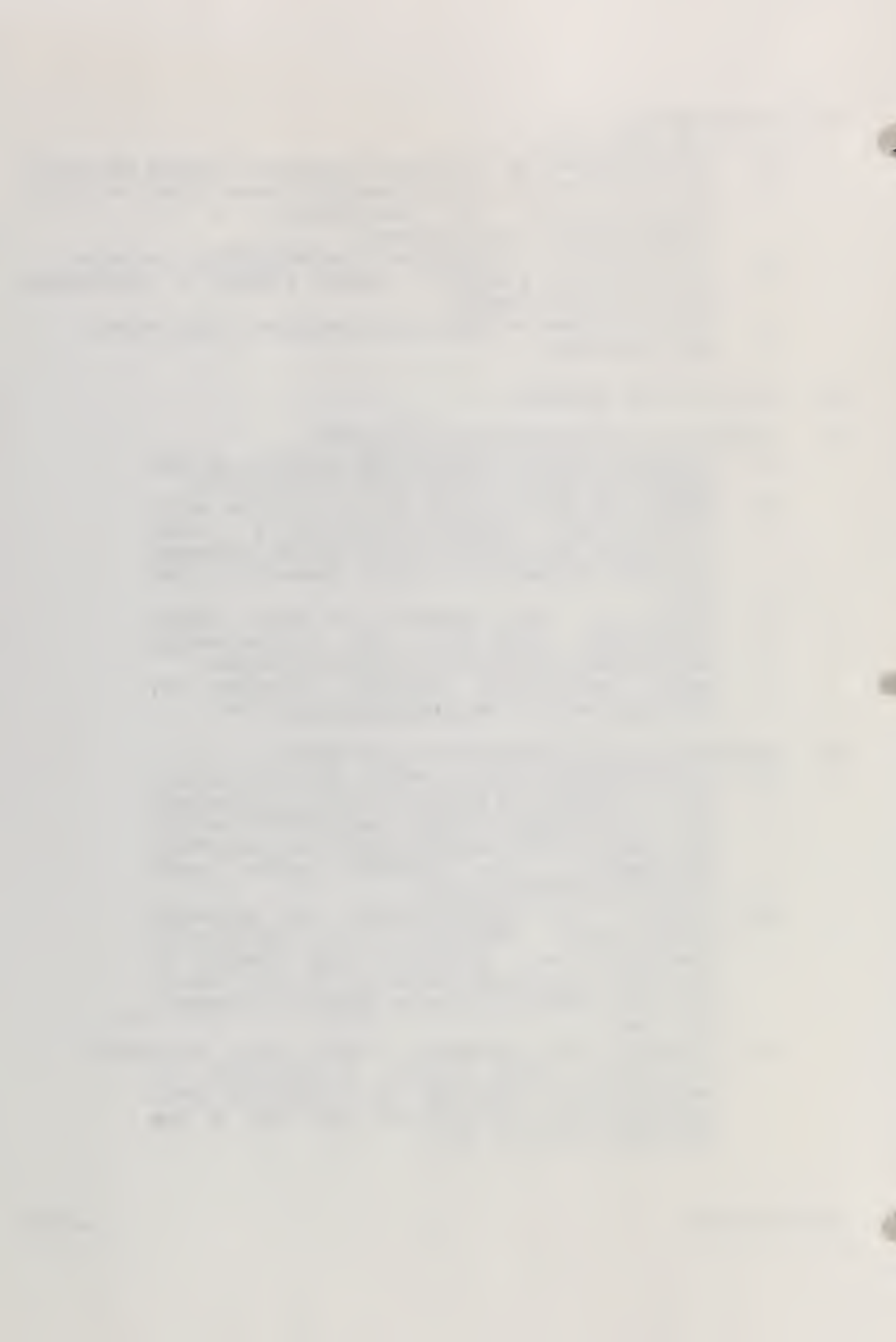
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- A. CLEANING AND RESTORING THE MURALS IN COIT TOWER, 1975, EMMY LOU PACKARD, MAY 15, 1975.
- B. REPORT ON THE FRESCOES OF COIT TOWER: PILOT CONSERVATION STUDIES; PREPARED BY ANNE ROSENTHAL AND CONSTANCE S. SILVER; PREPARED FOR THE SAN FRANCISCO ARTS COMMISSION; JUNE 1987.
- C. REPORT ON THE FRESCOS OF COIT TOWER: TREATMENT, PROBLEMS, AND RECOMMENDED MAINTENANCE; PREPARED BY ANNE ROSENTHAL
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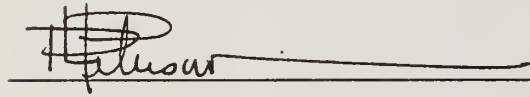
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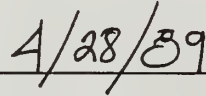
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- FF. THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION AND GUIDELINES FOR REHABILITATING HISTORIC BUILDINGS (REVISED 1983); U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE.
- GG. PRESERVATION BRIEF #1: THE CLEANING AND WATERPROOF COATING OF MASONRY BUILDINGS; ROBERT C. MACK, AIA.; NOVEMBER 1975.
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The preparation of this historic structures report was done for the City of San Francisco Arts Commission, by staff members of Interactive Resources, Inc., Dan Peterson, A.I.A., Historical Architect, Geraldine Peterson, Architectural Designer and Preservation Specialist, and Ann Marie Meenahan, Architectural Designer and Preservation Specialist.

The opinions and conclusions contained in this report are based only on the referenced documents and on limited observations at the site. The report is neither comprehensive nor exhaustive, and the opinions and conclusions may be subject to revision if additional data becomes available. Our services are provided with a standard of care in accordance with presently accepted professional practices in the architectural and historic preservation professions. The contents of this report and its format is consistent with the Department of Interior, Heritage Conservation Recreation Service (HCRS) Manual #6021. No warranty or guarantee, either implied or expressed, is made regarding the existing condition or future performance of the subject property.

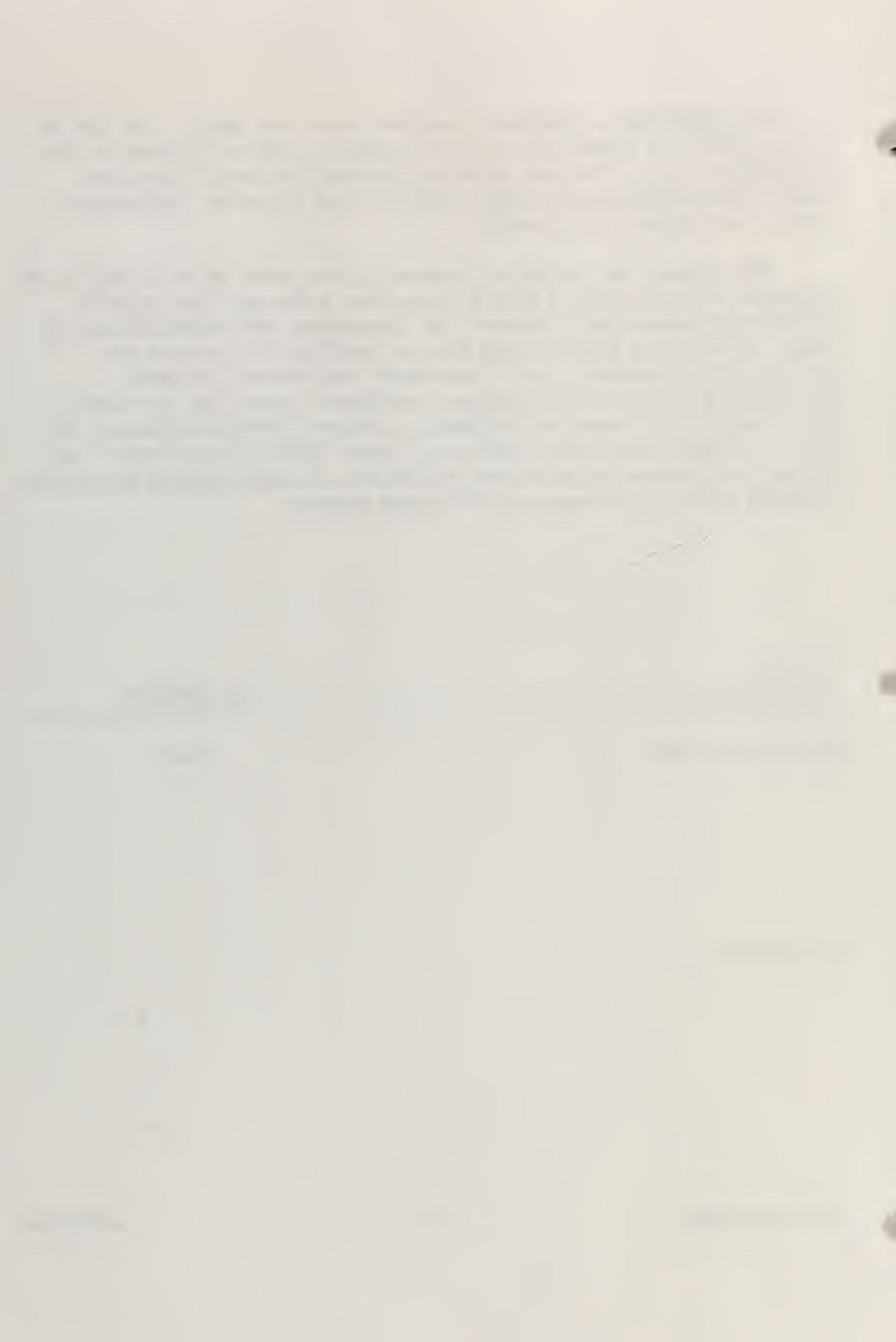


Dan Peterson, AIA



Date

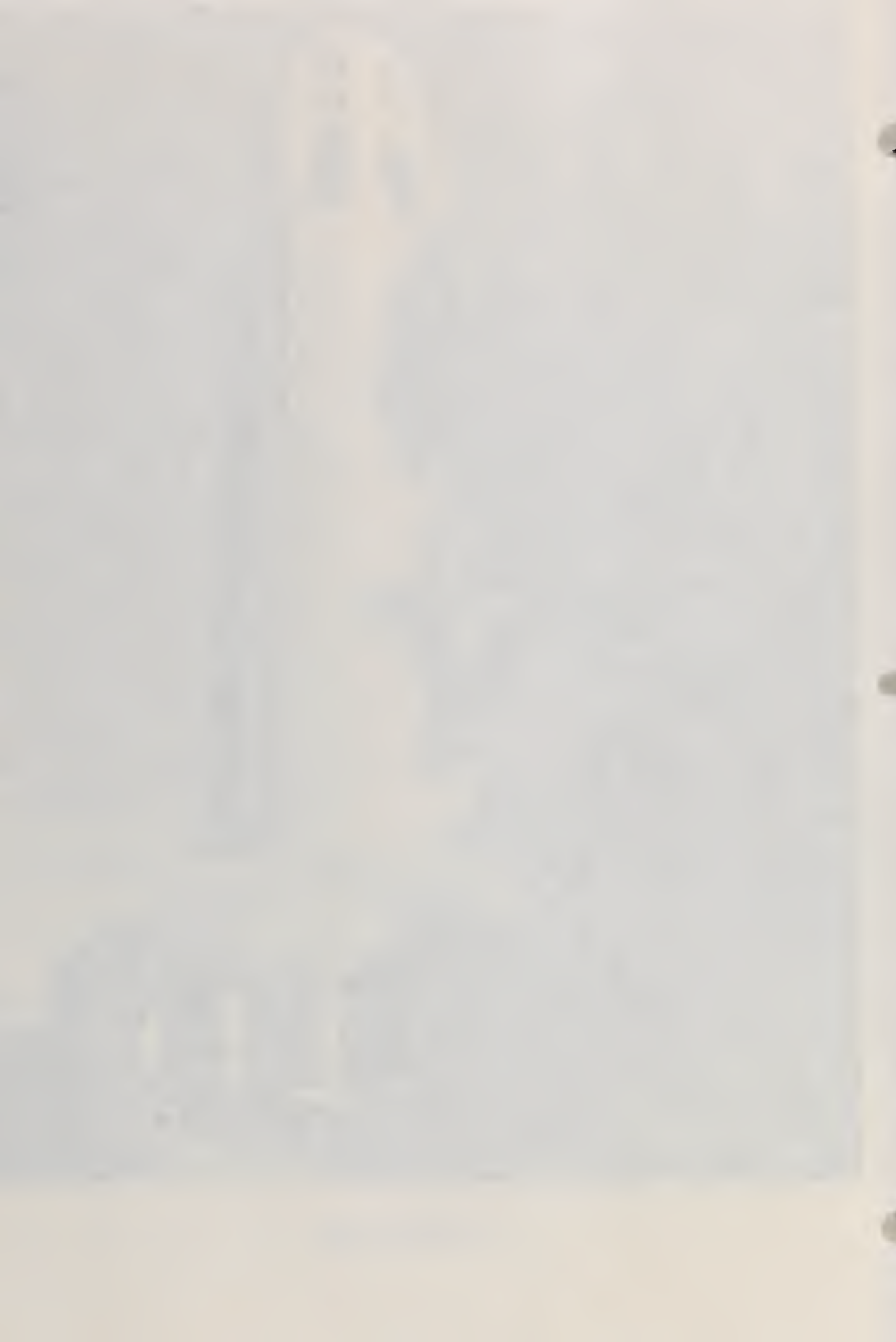
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I. INTRODUCTION



I. INTRODUCTION

A. Purpose

Historic structures represent the most tangible evidence of the nation's history and culture. They add interest, identity, and variety to our streets and neighborhoods. At the same time, because of their age, methods of construction, materials, and finishes, they present special challenges. Historic structures frequently involve materials and systems that are difficult to evaluate in terms of their physical behavior, especially when trying to evaluate them against modern standards and codes.¹

This Historic Structure Report is prepared for the City and County of San Francisco to fulfill the requirements of the Office of Historic Preservation, Sacramento, California in association with a grant for the restoration and protection of the murals at Coit Tower.

"The purpose of a Historic Structure Report is to (1) document and analyze the building's initial construction and subsequent alterations through historical, physical and pictorial evidence; (2) document the current state of the building's architectural materials and overall structural stability; (3) select as appropriate historic preservation treatment (protection, stabilization, preservation, rehabilitation, restoration, or reconstruction); (4) establish priorities for project work items; and (5) make an estimate of project costs. When completed, the report becomes the planning document which is the basis for developing the working drawings and specifications . . . prior to the commencement of project work."²

The purpose of this Historic Structure Report is to guide future maintenance and restoration in order to accurately rehabilitate this historic structure in accordance with The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.³

¹Lee H. Nelson FAIA, Preservation Assistance Division, National Park Service; Washington D.C., 1988.

²Lee H. Nelson, AIA, "The Moore House Report: A Retrospective" in The Moore House, The Site of the Surrender-Yorktown, A National Park Service Historic Structure Report (Washington, D.C.: National Parks & Conservation Association, 1981) pp. IX-X.

³U.S. Department of the Interior National Park Service Preservation Assistance Division, The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Washington, D.C., Revised 1983).



The Historic Structure Report includes the following:

1. Document Research: To evaluate and summarize research material and information collected by the City on the history of the property and the construction history for incorporation into the Historic Structure Report. This material is limited to City records such as those of the Department of Parks and Recreation, Bureau of Architecture, Arts Commission and City Library. Copies of Documents selected by City staff for this purpose were provided for this report.
2. Field Investigation: To do a cursory investigation of the building, interior, exterior and hard surface landscape to briefly describe the fabric and its condition. Information already developed by the Structural Engineers and Technical Roof Services are utilized for this phase.
3. Proposed Project Work: To incorporate in the report a long range program for the restoration and maintenance of the facility as developed by the City and other consultants not under this contract. This includes proposed work on the Fresco.
4. Report Writing and Editing: To include the data gained in the previous phases and assemble a Historic Structure Report for City submission to the State Office of Historic Preservation. Copies of measured drawings, photographs, historical documents, etc. are included in this report. One (1) camera ready copy of the report is submitted to the city in a 3-ring binder.

B. Objectives

This Historic Structure Report can be used when the rehabilitation, restoration, or reconstruction of Coit Tower involves fabricating significant missing architectural or landscape features, recapturing the appearance of Coit Tower at its dedication. This document provides a project architect with the information necessary for making appropriate decisions on restoring as recommended in The Secretary of the Interior's Standards for Rehabilitation. This document also recommends where further investigation should be made before designating a specific preservation treatment.

The Appendices included in this historic structure report include necessary documents for the Tower that should be used during future restoration or conservation projects. Also included is a copy of The Secretary of the Interior Standards for Rehabilitation as well as applicable Preservation Briefs and other technical information. It is intended that this document would be a living document, to be updated as information is found.





II. HISTORY OF THE PROPERTY

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INTRODUCTION

This report has been prepared by Geraldine Peterson and AnnMarie Meenahan of Interactive Resources, Point Richmond, California, for the Art Commission of the City of San Francisco in connection with the Coit Tower Historic Structure Report. This section follows the "Guidelines for Completing the National Register of Historic Places Nomination Form", (1986). The preliminary recommendations regarding the determination of eligibility have been determined by applying the "National Register Criteria of Evaluation," (1983).

1. PROPERTY NAME - Coit Tower

A. Historic Name - Coit Tower

2. LOCATION

A. Address of Property - Pioneer Park, Telegraph Hill

B. Address of Owner - Parks and Recreation San Francisco, CA 94102

3. CLASSIFICATION

A. Ownership of Property - Public, City, Recreation and Park Commission

B. Category of Property - Building, Monument

C. Number of Resources Within Property - 1

4. CERTIFICATION

**A. State/Federal Agency - State of California Office of Historic Preservation,
National Park Service.**

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST
BY
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5. FUNCTIONS OR USES

A. Historic Functions - Recreation and Culture / monument, outdoor recreation

B. Current Functions - Recreation and Culture / monument, museum, work of art, outdoor recreation

6. DESCRIPTION

A. Architectural Style - Modern Movement / Art Deco

B. Materials - Reinforced concrete, dash coated

C. Statement of Description for Historical and Architectural Properties -

The following paragraph, dated November 14, 1932, is a general description of the structure taken from the project specifications written by Arthur Brown, Jr., Architect for the project.

The structure is a Monumental Tower together with its terraces and step approaches, is to be built (in 1933) on the property of the City and County of San Francisco on Telegraph Hill known as Pioneer Park which is located near the intersection of Kearny Street and Greenwich Street, in the City and County of San Francisco, State of California. The Owner is the City and County of San Francisco. The Architect is Arthur Brown, Jr., 251 Kearny Street, San Francisco. (The designer was Henry Howard, son of architect John Galen Howard.) The structure is to be built with reinforced concrete throughout, including foundations, walls, floors, stairway and terraces as shown. On the ground floor, there will be a public space with exterior walls of ornamental concrete columns and walls and glazed steel sash. The ground floor will also contain a main entrance and elevator lobby and both male and female toilet rooms. There will be observation balconies at the Belvedere and Lantern floor levels respectively, 83'0" and 105'6" above a base 32 feet high. (The height of the tower was raised 43'6" during construction.¹) There will be a passenger electric traction type elevator to operate between the ground floor and Belvedere levels. Surrounding this elevator and extending from the ground floor up to the Lantern floor there will be a circular stairway of reinforced concrete and above this a circular stairway of cast iron (changed to painted concrete) extending up to the roof bulk head level. The flooring throughout the public portions of the ground floor, the ground floor elevator lobby and the roof terraces over will be finished with a colored quarry tile. (The floor at the roof terrace above the

¹Arthur Brown, Jr., signed by John A. Baur, Letter to Captain B. P. Lamb, Secretary Board of Park Commissioners, San Francisco, California, dated December 19, 1932.

first floor was covered later with a membrane deck coating.) The toilet rooms of ground floor will have a wainscot of glazed tile and floors of ceramic mosaic tile. The exterior concrete surfaces throughout the structure and its appurtenances will be finished with a dash coat of cement mortar of uniform color and texture.

The building was built, essentially as described above, by Young and Horstmeyer at a total cost of \$124,605, including landscape and architects fees, and was dedicated on October 8, 1933.

Inside the monument on the walls of the first and second floors are 3,691 square feet of murals, frescoed in 1934 by twenty-five of San Francisco's leading artists and 19 assistants, funded by the federal Public Works of Art Project (PWAP) program of the New Deal. The theme for the murals was "Life in California in 1934."² The building was closed for the painting of the frescoes, and reopened after controversy over a few of the artists "social comment" diminished. Believed to be due to the revolutionary nature of the work, the frescoes were subject to a great deal of vandalism. In 1960, Dorothy Puccinelli Cravath engaged the original artists to assist her touch up the vandalized work. The frescos remained behind locked glass doors, installed to prevent access into the galleries, until 1977 after the portions damaged by water seepage and cracking plaster were restored and the cigarette smoke film on the lobby oil panels was removed by Emmy Lou Packard. Anne Rosenthal completed a conservation program on the first floor frescos in March of 1989.

D. Building Structure or Object -

1. **Type of Structure - Concrete tower building**
2. **Building Placement - Top of Telegraph Hill in Pioneer Park, a public park overlooking San Francisco bay.**
3. **General Characteristics -**
 - a. **Shape and arrangement - Tower base, circular with rectangular intersections (gently bowed square) housing the first level museum, gift shop, second level apartment, and an enclosed roof terrace. Rectangular shaft base at the third level. Circular fluted shaft at levels four through ten housing water tanks at levels five and six. Circular belvedere containing an observation area at level eleven, a machine room at level twelve and an open observation deck at level thirteen.**
 - b. **Construction - Reinforced concrete with a dash coat covering the exterior, wood and plaster interior finishes, concrete stairway and elevator at the center of the shaft.**

²Mildred Hamilton, interviewing Elaine Molinari in the article "The artistry of Coit Tower - inside and out," San Francisco Examiner, July 20, 1982, Sec. E. p. 1.

4. Specific Features -

- a. Entrance portico - Monumental entrance portico with two miniature fluted columns.
- b. Windows - Steel casement, originally painted with aluminum paint, now has many coats of paint.
- c. Doors - Painted steel casement doors with clear glass at the public gallery level, steel revolving glass entry door now fixed in place.
- d. Tower - Fluted tower containing water tanks and an elevator and stairs to the observation areas at the top.
- e. Belvedere and Lantern levels - Open public observation areas at the top of the tower with arched tops on the openings.

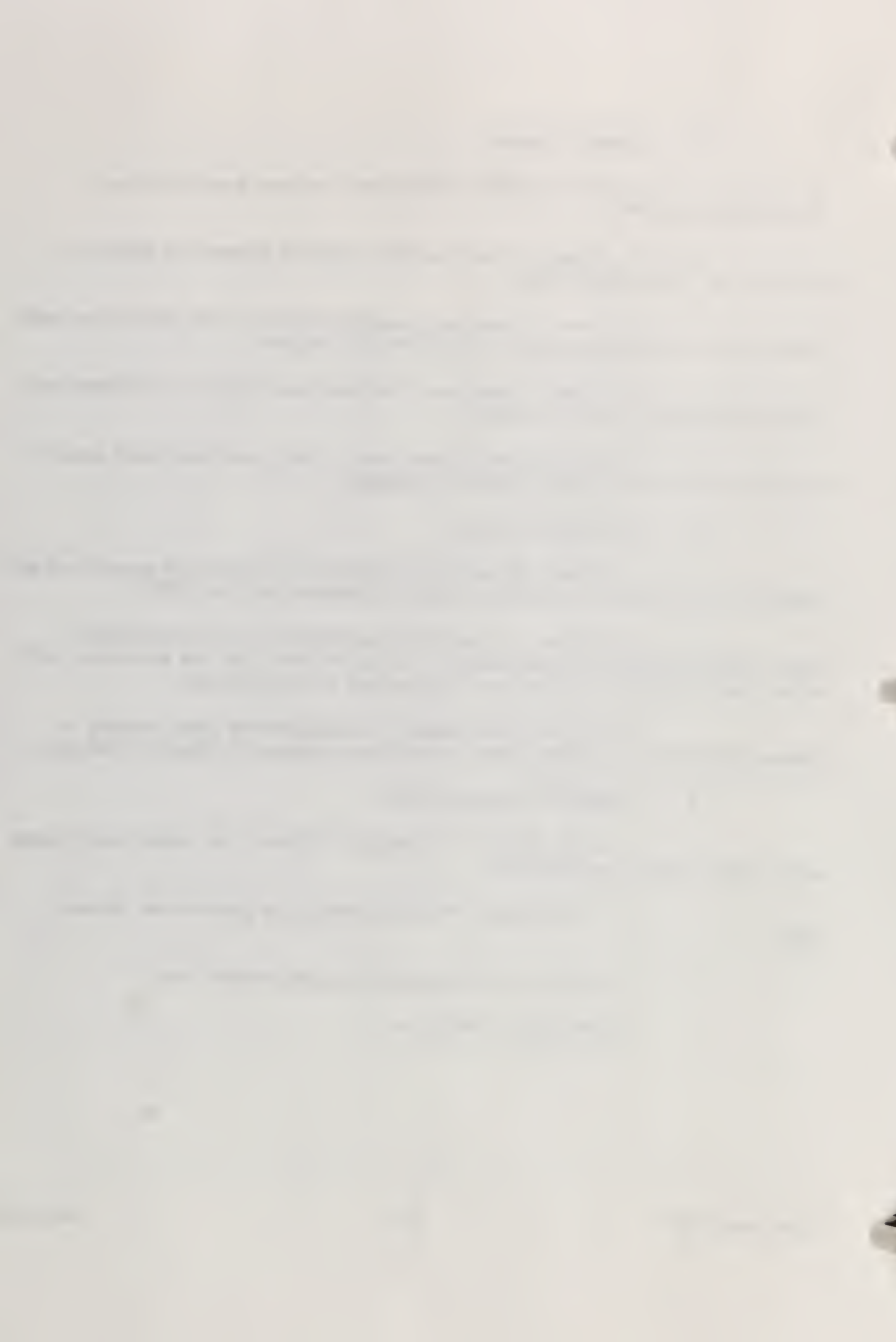
5. Decorative elements -

- a. Murals - Frescoes on the walls at the gallery and second level and connecting stairs painted by local artists showing California life in the 1930's.
- b. Plaques - To the left of the entrance door is Haig Patigian's plaque commemorating Lillie Coit's bequest. In the vestibule in the left alcove is a *DAR* bronze plaque commemorating the inner signal station on Telegraph Hill.
- b. Exterior ornamentation - A cast high relief tablet depicting a phoenix flanked by two bundled fasces over the portico entrance by Robert B. Howard.

6. Significant interior features -

- a. Light fixtures - Art deco light fixtures in the public gallery spaces and in entrance above revolving door.
- b. Interior doors - Wood decorative door grilles in the elevator lobby.
- c. Elevator - 1930's manually opening elevator doors.

7. Outbuildings - Pumphouse



8. Other man made elements - Bronze statue of Christopher Columbus in center of parking circle.

9. Information on moved properties - Original site

10. Alterations

a. Deck surfaces - Original quarry tile replaced with waterproof membrane walking surface on Lantern Level. Original quarry tile covered with waterproof membrane on Belvedere and Base Level deck surfaces.

b. Doors - revolving door replaced wood panel doors. Now revolving door is fixed in place.

c. Gift shop - Gift shop remodeled in 1980.

11. Deterioration - Water tanks need replacing, interior quarry tile cracked, exterior metal doors corroded, parking lot needs repair, retaining walls and planters cracked and stained, ceilings need paint removed and repaint, windows and glass doors in public gallery need repair and repaint, cracks in lower walkways, original plaza steps deteriorating, marble base at statue needs repair, pumphouse needs repair, exterior railings need repainting, interior needs repainting, art deco lights need restoration, plaques and hardware need cleaning.

E. Historic Site Description -

The public park on Telegraph Hill where Coit Tower was built, once called Pioneer Park, was an observation and signalling station in 1849, and was dedicated to the city in 1876 as open space. A narrow two lane paved road curls around the hill in the residential neighborhood and arrives at the top of the hill at the parking circle. The parking area is bounded by a sidewalk and a low wall that divides the public area from the landscaped slope down. In the center of the parking area is a 1957 statue of Christopher Columbus surrounded by a marble wall and concrete walkway. A monumental stair rises from the entrance to the parking lot to the plaza level. These stairs were once used for an observation tower that was destroyed in a fire in the late 1800's. The stairs were modified as part of the front entrance design for the tower. The plaza level is landscaped around the entire building. Originally designed but never built was a courtyard to the south of the building. An existing north stairway from the street was utilized in the original landscape design and a new stone stairway was built from the street below to a pathway below the plaza level.

7. SIGNIFICANCE

A. Applicable National Register Criteria - A, B, C,

B. Criteria Considerations (Exceptions) - NONE



C. Areas of Significance -

1. Architecture (Criteria B and C)
2. Art (Criteria B and C)
3. Communications (Criterion A)
4. Economics (Criteria A and B)

D. Period of Significance - 1849 to 1876, 1929, 1931 to 1933, 1934

E. Significant Dates - 1849, 1853, 1876, 1929, 1931, 1933, 1934

F. Significant Persons - MULTIPLE

G. Cultural Affiliation - N/A

H. Architect/Builder -

1. Architect - Brown, Arthur Jr.
2. Designer - Howard, Henry
3. Builder - Young and Horstmeyer

I. Statement of Significance -

Coit Tower, funded by a bequest from Lillie Hitchcock Coit in 1929 "to add to the beauty of the city I have always loved," is significant for its controversial design by the architectural firm of Arthur Brown, Jr., its prominent placement on historic Telegraph Hill in 1933, once home of the San Francisco Bay signaling station and the first western telegraph station, and for its extensive frescoes on the interior walls depicting the social, political and economic concerns of California in the early 1930's. The following briefly explains why Coit Tower is significant under the criteria identified previously, how Coit Tower represents a significant period in the historic development of the locality, state, and the nation, and how Coit Tower is important in each area of significance previously indicated.

1. Area of Significance - ARCHITECTURE

Criteria B - Significant persons were associated with the conception of Coit Tower: Lillie Hitchcock Coit and Herbert Fleishhacker, President of the Board of Park Commissioners. At the age of seven, Lillie Hitchcock moved with her family to San Francisco from Maryland in 1851. Not long after her arrival, she was involved in one of San Francisco's early disastrous fires. She managed to escape, but two of her playmates



were not as fortunate.³ In the 1850's, firemen were revered as "the best men" in the city. It was at this time the legend of Lillie Coit begins with her assisting the desperate, short staffed Knickerbocker Engine Company No. 5 of the Volunteer Fire Department. She helped pull fire engines up Telegraph Hill to reach a fire and called out for assistance to the men watching on the street. Lillie soon became the mascot of No. 5, wearing an honorary uniform and a gold diamond-studded fireman's badge reading "No. 5." In 1863 Lillie Hitchcock married Howard Coit, a wealthy caller at the old San Francisco Stock and Exchange Board. After her husband died in 1885 at age 47 of heart trouble, Lillie Coit spent most of her life in France, becoming a favorite of the court of Napoleon III. She returned briefly to San Francisco in 1900, but after she witnessed a murder in her apartment at the Old Palace Hotel, she left for France for another twenty years. Towards the end of her life she returned to her "soul city." She died in the Dante Sanatorium in 1929. Childless, Lillie Hitchcock Coit left one third of her money to the University of California, one third to the University of Maryland, and one third to San Francisco "to be expended in an appropriate manner for the purpose of adding to the beauty of the city which I have always loved."⁴

Lillie Coit's bequest was almost used toward the construction of a roadway around Lake Merced.⁵ A "Coit Advisory Committee" was created "for the expenditure of the bequest of the late Lillie Hitchcock Coit" within the city's Board of Supervisors.⁶ Herbert Fleishhacker, both member of the Board of Supervisors and President of the Board of Park Commissioners, requested to "make funds available from the Coit Bequest for the construction of a memorial for the beautification of Telegraph Hill." After Arthur Brown Jr. had won the Coit Memorial competition and received the commission as architect, it was then Fleishhacker who expeditiously sought bids from contractors and dispelled objections over design by pushing through the contract for construction.

Significant persons are also associated with the design of the Tower. Various schemes from prominent artists were presented to the Art Commission for their competition for a memorial on Telegraph Hill. The winner was the proposal by the prominent architect Arthur Brown, Jr. (graduate from the Ecole de Beaux Arts in Paris and designer of San Francisco's City Hall and War Memorial Opera House in Civic Center). Henry T. Howard, son of famed architect John Galen Howard, was the project architect.

³Masha Zakheim Jewett, Coit Tower, San Francisco: Its History and Art (San Francisco, California: Volcano Press, 1983), p. 18-20.

⁴Further details on the life of Lillie Hitchcock Coit can be found in Helen Holdredge's book, Firebelle Lillie, (New York: Meredith Press, 1967).

⁵Jewett, Coit Tower, p.20.

⁶Recreation and Park Commission Meeting Minutes, San Francisco, California, September 2, 1931.

Criteria C - Coit Tower embodies the distinctive characteristics of reinforced concrete shaped from form work. Technology in reinforced concrete construction was still at an experimental stage only twenty years before Coit Tower and still experiments were being made at the time Coit Tower was built.⁷ Few 181 foot structures of reinforced concrete had been constructed by that time in the United States. According to Arend Horstmeyer, of the construction company Young and Horstmeyer, the concrete was poured in the four foot form work each day. Before each pour, the edge of the form work at each flute had to be shaved off in order to produce a tower with a top 18" in diameter smaller than its base.⁸ It took 350,000 board feet of lumber just to build the scaffolding that surrounded it. Coit Tower also represents work of a master, Arthur Brown Jr. Although the project architect was Henry T. Howard, and much of the work was executed by John A. Baur,⁹ it is noted that it was Brown who designed its concept, shape, and proportions.¹⁰ Arthur Brown, Jr. is one of San Francisco's primary architects due to his design of the neo-classical City Hall and War Memorial Opera house, two of the most prominent buildings in the city. Coit Tower, because of its unique design and use of reinforced concrete, and its strategic placement on Telegraph Hill, possesses high artistic value. Nowhere is there a building quite like Coit Tower.

2. Area of Significance - ART

Criteria B - A significant person in the area of art for Coit Tower is Dr. Walter Heil, director of the de Young Museum in Golden Gate Park. On December 10, 1933, Edward Bruce of the United States Treasury Department, telegraphed Dr. Heil. "A central committee [for District 15] will be set up in San Francisco and we hope that you will accept the position [of chair] of this committee to supervise the work done in Northern California and Nevada."¹¹ It was Dr. Heil's task to select and supervise "worthy artists" and to choose appropriate public buildings to embellish. Dr. Heil organized a committee, engaging important members of the community at that time, to decide upon a major theme, a set palette of colors, and a consistent scale of proportion. The committee also reached a consensus about the content of the artwork: they decided to whitewash out anything they felt was not politically or artistically appropriate. Dr. Heil enthusiastically wrote to Edward Rowan, the Assistant Technical Director of the PWAP in Washington D.C., describing the efforts at Coit Tower as "our *piece de resistance*" including some of the country's best artists on one project atop Telegraph Hill, "a vantage point constantly

⁷Carl W. Condit, American Building, (Chicago and London: The University of Chicago Press, 1975), pp. 240-250.

⁸Gail Bernice Holland, " 'We didn't try to judge it . . . it was another job,'" San Francisco Examiner, Wednesday, December 28, 1977.

⁹Arthur Brown, Jr., signed by John A. Baur, Letter to Captain B. P. Lamb, Secretary Board of Park Commissioners, San Francisco, California, dated December 19, 1932.

¹⁰Henry T. Howard, "The Coit Memorial Tower," *Architect and Engineer*, 115:3, p. 13.

¹¹Bruce to Heil, telegram dated 12/10/33.

visited by local residents and tourists." It was Heil who proposed the medium of fresco.

The Tower is associated with many significant artists and sculptors. To the left of the entrance is a bronze plaque by Haig Patigian, commemorating Lillie Coit's bequest. Haig Patigian's Volunteer Fire Department statue, presently located in Washington Square, was originally intended to be located on Telegraph Hill as part of Lillie Hitchcock Coit's bequest.¹² Haig Patigian was one of the many artists who submitted a memorial design for the competition.

Coit Tower architect Arthur Brown, Jr., commissioned sculptor Robert B. Howard (1896-1983) (brother of Henry T. Howard) to create a cast stone high relief plaque four feet in diameter of the phoenix bird (symbol of San Francisco's many "rebirths" after several widespread fires) to adorn the Tower's entrance. Bundled fasces on either side commemorate Lillie Coit's connection with the Fire Department. Howard studied at the College of Arts and Crafts in Oakland before winning a year's scholarship to the Art Students' League in New York. Howard created many sculpture pieces for the city of San Francisco, including the popular large black sculpture piece of killer whales now at the Academy of Sciences in Golden Gate Park, representations of gas and electricity for the Pacific Gas and Electric Company. Howard taught sculpture at the San Francisco Art Institute.

The twenty-five fresco artists were significant contributors of society, each in their own way besides giving us a view to life in San Francisco in the 1930's.¹³

Maxine Albro (1903-1966) *California* - Native of Iowa; studied at California School of Fine Arts; studied in Paris, then in Mexico with Diego Rivera; created frescos at the Ebell Women's Club in Los Angeles and a mosaic in Anderson Hall at the University of California Extension in San Francisco, (both presently gone); fresco decorations for private homes including Col. Harold Mack in Monterey; her easel art was popular in local and national museums; married to Parker Hall.

Victor Arnautoff (1896-1979) *City Life* - Native of Russia; came to San Francisco via Mexico, assisted Diego Rivera; studied at California School of Fine Arts; project director at Coit Tower; painted frescos in the Military Chapel at Presidio, and three fresco lunettes in the Anne Bremer Library of the San Francisco Art Institute, George Washington High School lobby, and other locales in the Bay Area; taught at Stanford University.

¹²Recreation and Park Commission Meeting Minutes, San Francisco, California, September 2, 1931.

¹³Information on the artists' origin, the school they attended, and their most significant contribution to society are listed below next to their names. The information on the artists is from Masha Zakheim Jewett's book, Coit Tower, (San Francisco: Volcano Press, 1983), pp. 121-131.

Jane Berlandina (1898-1962) *Home Life* - Native of Nice, France; studied with Raoul Dufy; designed costumes for San Francisco Opera Company; had exhibitions at the Metropolitan Museum in New York and in Local museums; married to architect Henry Howard.

Ray Bertrand (1909-1949) *Meat Industry* - Native of San Francisco; student of Spencer Macky at California School of Fine Arts, where he later taught lithography; won the Anne Bremer Scholarship in 1927 enabling him to make "outstanding contributions to the development of the graphic arts of the West;" won an Abraham Rosenberg Scholarship in 1942.

Ray Boynton (1883-1951) *Animal Force and Machine Force* - Native of Iowa; studied in Chicago; came to California to be the state's first frescoist; first fresco in 1917 in a home in Los Altos; taught fresco at California School of Fine Arts; created first large-scale mural in public building, auditorium at Mills College in Oakland; "dean of the fresco painters" at Coit Tower; drew many sketches of mining in Mother Lode; painted thirteen lunette murals in tempera for the Modesto post office in 1936; was a friend of John Steinbeck and Col. Scott Wood.

Ralph Chesse (1900-) *Children at Play* - Native of New Orleans, in early 1930's came to San Francisco; professional puppeteer; worked mainly with children theater; Coit Tower fresco was the first and last of that medium; worked at Federal Theater at the Golden Gate Exposition (Treasure Island), 1939-40; made paintings of shipyards during WWII.

Rinaldo Cuneo (1877-1939) *Bay Area Hills* - Native of San Francisco, began art studies in 1910 under sculptor Arthur Putnam and artist Gottardo Piazzoni; after studying at Mark Hopkins Art Institute (later called California School of Fine Arts, and today the San Francisco Art Institute), he went to Paris and London; taught at California School of Fine Arts.

Ben Cunningham (1904-1975) *Outdoor Life* - Native of Colorado, studied architecture at the University of Nevada, Reno; studied art at California School of Fine Arts; after Coit Tower, he was the assistant art director for the Northern California Federal Art Project.

Mallette (Harold) Dean (1907-1976) *Stockbroker and Scientist-Inventor* - Native of Washington; studied at California School of Fine Arts; one of the most prolific painters of government-sponsored murals in Northern California; he was a furniture designer, decorator of books, graphic artist, and created many labels for the California wine industry; another government sponsored mural was an orchard scene in the Sebastopol post office; has work represented in the San Francisco Museum of Art and the New York Public Library.

Parker Hall (1898-1983) *Collegiate Sports* - Native of Colorado; studied at California School of Fine Arts; has work represented at the Library of Congress; married to fellow artist Maxine Albro.



Edith Hamlin (1902-) *Hunting in California* - Native of California; studied at California School of Fine Arts; much work in private homes, post offices in Tracy and Martinez, California, and Mission High School in San Francisco (1936-37); painted two panels in the Department of the Interior building in Washington D.C.; married to local artist Maynard Dixon, noted for his paintings of the Southwest.

George Harris (1913-) *Banking and Law* - Native of California; studied at California School of Fine Arts; painted a mural in the San Francisco Chamber of Commerce building; has easel works in San Francisco Museum of Art, Library of Congress, and the Carnegie Institute; was professor in the Art Department at Stanford University.

William Hesthal (1908-) *Railroad and Shipping* - Native of San Francisco; studied at California School of Fine Arts; has works at the San Francisco Museum of Art; was one of six muralist (all of whom painted in Coit Tower) who art connoisseur Albert Bender commissioned in 1936 to decorate the Anne Bremer Library at California School of Fine Arts, today called San Francisco Art Institute; had directed the Santa Barbara Museum of Art.

John Langley Howard (1902-) *California Industrial* - Native of New Jersey; son of John Galen Howard, brother of sculptor Robert Howard and architectural designer Henry Howard; studied at University of California and the California School (College) of Arts and Crafts, as well as the Art Students' League of New York; Coit Tower was first and last fresco; has executed many easel paintings, particularly for sports magazines.

Lucien Labaudt (1880-1943) *Powell Street* - Native of France; studied in England; came to U.S. in 1910; was costume designer for the San Francisco Artists' Parilia Balls of the 1920's and 1930's and the Bohemian High Jinx affairs; had his own school on Powell Street called California School of Design (now gone); painted fresco panel in 1936 at George Washington High School in San Francisco called *Advancement of Learning Through the Printing Press*; painted fresco in 1936-37 at the Beach Chalet depicting San Francisco scenes and personalities; during WWII he went to India as an artist war correspondent; was killed en route to China in an airplane crash in 1943; for many years his wife maintained the Lucien Labaudt Art Gallery in San Francisco especially for young or not widely exhibited artists.

Gordon Langdon (1910-1960's) *California Agricultural Industry* - Came and left without biographical traces; painted fresco mural *Modern and Ancient Science* over the main entrance to the library at George Washington High School; painted fresco *The Arts of Man* in the Anne Bremer Memorial Library at the San Francisco Art Institute, commissioned with five other artists by Albert Bender in 1936; painted frescos commissioned by Mrs. Leon Sloss for her home.



Otis Oldfield (1890-1969) *San Francisco Bay, East; Seabirds and Bay Area Map* - Native of Sacramento, California; studied at Arthur Best's private art school in San Francisco; went to Paris from 1911-1927; his subsequent San Francisco exhibit of European works had a significant impact on the local art colony; in 1924 began teaching at the California School of Fine Arts; in 1925 won the Gold Medal Award for graphic arts for his drawing *Knife Grinder*; was art supervisor for the elevator lobby at Coit Tower.

Fred Olmsted, Jr. (1911-) *Power* - Native of San Francisco; grandson of Frederick Law Olmsted, the famous planner of New York City's Central Park, and son of F.L. Olmsted, landscape architect and conservationist; initially came onto the Tower project to assist John Langley Howard and George Harris; Howard later assigned him the three-foot panel above the main entrance; he was a painter, sculpture, and later an architect; was one of six artists selected by Albert Bender to decorate the Anne Bremer Memorial Library at the Art Institute; created murals in the Utah State Capitol; painted mural for the library of the San Francisco Boys' Club (now gone); created two large heads of tufa stone: Thomas Edison and Leonardo da Vinci (1941--WPA) outside the east entrance of Timothy Pfleuger's science building of the City College of San Francisco, and inside the main entrance he painted two fresco panels showing students engaged in various scientific pursuits in a semi-abstract composition (1942--WPA).

Jose Moya Del Pino (1891-1969) *San Francisco Bay, North* - Native of Priego, a small town in the province of Cordoba, Spain; at nine years of age apprenticed to an itinerant artist who painted religious pictures of patron saints; lived by traveling village to village selling paintings; studied at Academy of Fine Arts in Madrid in 1907; won a traveling scholarship; in 1915 associated with Spanish Post-Impressionists, including Juan Gris and Diego Rivera; painted a portrait of King Alfonso III of Spain in the early 1920's; spent four years painting forty-one reproductions of Velasquez's paintings in El Prado, Madrid and in Valencia; King Alfonso asked him to travel with the collection to the New World as a goodwill gesture; exhibit ended in San Francisco where he settled; Oldfield asked him to paint for Coit Tower; won competition for a mural in the Stockton, California post office, sponsored by the PWAP; painted public art in Redwood City and San Rafael in addition to many easel art; won many awards for his aesthetic and technical mastery.

Suzanne Scheuer (1898-) *Newsgathering* - After Coit Tower, painted murals in two post offices, at Caldwell and Eastland, Texas, and one mural at the post office in Berkeley, California.

Ralph Stackpole (1885-1973) *Industries of California* - Native of Oregon; worked with sculptor Arthur Putnam and painter Gottardo Piazzoni; studied at the Ecole des Beaux Arts in Paris; was part of the art scene in San Francisco in the teens and 20's; has works all over California; created bronze heads in 1919 for City Hall; created two carved pylons representing *Earth's Fruitfulness* and *Man's Inventive Genius* outside the San Francisco Stock Exchange.

Edward Terada (1908-) *Sports* - Native of Japan; studied at the California School of Fine Arts with Otis Oldfield and later returned to study with Sekido Yoshida in Japan; he was a painter of portraits and miniatures, a sculptor, a block printer, a general designer, a draftsman, a lithographer, an etcher, and a good teacher; he returned to Japan after WWII.

Frede Vidar (1911-) *Department Store* - Native of Denmark; painted at age twelve; studied at the California School of Fine Arts, then with Matisse and Dufy in Paris; in 1935 won a prestigious prize to study art in Paris for three years; his controversial "American Allegory" paintings were exhibited in 1941 in Los Angeles.

Clifford Wight (1900-1960's) *Surveyor and Steelworker; Farmer and Cowboy* - Came and left without biographical traces; his Communist logo was centered around controversy in Coit Tower keeping the doors locked during the summer of 1934; he denied being a communist, but just exercising his right of free expression, stating the hammer-and-sickle symbol was just one of several alternative economic systems of the times; assisted Diego Rivera first in Detroit and then in the Rockefeller Center in New York City, a fresco that was destroyed in 1933 because it contained a portrait of Lenin.

Bernard Baruch Zakheim (1898-1985) *Library* - Native of Poland; came to San Francisco seeking political asylum in 1920 after WWI; had begun art studies in Europe and continued them at the Mark Hopkins Art Institute (later called the California School of Fine Arts, and today, the San Francisco Art Institute); won by competition the first fresco project in a public building in San Francisco, the Jewish Community Center; he along with Ralph Stackpole, had the prestige necessary to organize the artists to ask for a federally sponsored art project; painted mural in 1934 for the Alemany Health Center; took on four-year task of illustrating the history of medicine at the University of California Medical Center (1935-38); painted in 1938 oil murals for post offices in Texas; in 1961 returned to Poland to do a 6 by 25 foot fresco called *The History of the Jews Through Song*; continued the theme of human suffering and protest, sculptured in wood and granite in his Sebastopol, California orchard.

Also of significance are the fresco conservators. Through the years the frescos suffered from vandals scratching away the plaster and water damage from the roof. The first restoration was executed in 1960 by Dorothy Puccinelli Cravath, a local artist who engaged original artists to help her touch up vandalized paintings. In 1975, Emmy Lou Packard, a local artist and former assistant to Diego Rivera, restored portions damaged by water seepage, plaster cracking, and cigarette smoke film on the oil panels in the elevator lobby. The lobby had remained open when the galleries were closed to allow access to the observation deck elevator. In 1989, Anne Rosenthal of San Francisco, headed a team of conservators to restore the frescos on the first floor murals.

Criteria C - One of the most significant aspects of Coit Tower is the internationally recognized, Diego Rivera inspired, technically exemplary, and increasingly rare fresco art work. The arduous method of fresco painting, its high artistic value, and the increasing appreciation for them as great works of art, all contribute to the significance of the frescos at Coit Tower.

Depression-era artists competed to join the federally funded Public Works of Art Project, both from artistic and economic motives. The theme was "Life in California in 1934." Some of The City's top talents were among the 25 artists and 19 assistants who spent six months turning the interior walls into vivid visual images of the times.

"Each artist was assigned a section and covered a space about 2 feet by 2 feet each day. Master plasterers came in each morning to spread one-fourth inch of fresh plaster. The artist picked up dry pigments with a wet brush and applied them on the wet plaster. When one made a mistake, it had to be chipped out."

The agricultural wealth, a department store with a cafe offering 25-cent lunches, industry, banking, a Financial District Scene, a climb up Powell Street, libraries, newspapers, sports, transportation of half a century ago are brought to life as the tour participants look and listen.¹⁴

The art of fresco painting dates back to very early Egyptian paintings on the walls of tombs (c. 2900 B.C.). The finest frescoes were carried out during the period from the thirteenth to sixteenth centuries A.D. by numerous Italian artists from Giotto (1267-1337) to Raphael (1483-1520) and Michelangelo (1475-1564).¹⁵

The term fresco is derived from the Italian word meaning fresh, and is applied to the process of applying mineral and earthy pigments to the damp surface of lime stucco before it dries and hardens. The pigments penetrate the surface and become an integral part of the work and are encased eventually in calcium carbonate. True frescoes have remained in good condition after hundreds of years.¹⁶

¹⁴Mildred Hamilton, interviewing docent Elaine Molinari while she is giving a tour of Coit Tower in the article "The artistry of Coit Tower - inside and out," San Francisco Examiner, July 20, 1982, Sec. E. pp. 1. and 3.

¹⁵Norman Davey, O.B.E., D.Sc., Ph.D., F.S.A., A History of Building Materials, (London: Phoenix House, 1961), p. 175.

¹⁶Ibid., p. 172.

According to Masha Zakheim Jewett, author of Coit Tower and daughter of one of the artists, Bernard Baruch Zakheim:

Much of the enthusiasm and esprit de corps among the artists at Coit Tower seemed to be generated by the medium of fresco. As Dr. Heil put it, "The technique of fresco is, in itself, a unifying influence . . . The artists established for themselves one scale and also one palette consisting of elementary earth colors."

The fresco painters at the Tower followed the old Italian tradition as the Mexican artists interpreted it. In this process, fine marble dust is mixed with slaked (pronounced "slacked") lime to create the painting surface. Plasterers slake the lime by firing it quickly in kilns, then soaking it in water--historically, in pits in the ground, but nowadays in large vats--for about three months.¹⁷

Several artists used a medium other than fresco. The artists for the lunettes in the elevator lobby, Otis Oldfield, Jose Moya del Pino, and Rinaldo Cuneo painted oil on canvas and Jane Berlandina painted with egg tempera on the second floor of the Tower. The oil on canvas paintings were produced in the artists' studios and then installed in the lunettes. They are significant not only because they are fine works of art by noted artists at the time, but also their content depicts views to the Bay Area as they were in the early 1930's. It is remarkable to see the paintings of empty rambling hills that are today congested with condominiums and subdivisions. The paintings depict a time before the Bay Bridge and the Golden Gate Bridge.

The egg tempera mural by Jane Berlandina is quite different from the fresco and oil media of the other artist. Most of the other artists were trained or influenced by the Mexican artist, Diego Rivera. By contrast, her teacher was French Post-Impressionist Raoul Dufy. Although Berlandina did conform to the scale of the other artists, her style and techniques were completely different.

The term "tempera" is derived from the Latin temperare--to mix in due proportion. It is a water-colour process in which the water and pigment are mixed with organic binding substances such as the yolk or the white of an egg, gum tragacanth, glue, honey, gum arabic or mucilage, or milk and milk products, and applied to a dry surface.¹⁸

¹⁷Jewett, Coit Tower, pp. 34 and 35.

¹⁸Davey, A History of Building Materials, p. 176.



Therefore, the fresco, oil on canvas, and egg tempera works of art at Coit Tower are significant contributions to the art world due to their contextual, compositional, and technical excellence. The frescoes are additionally significant because they represent a movement in art at the time which began in Mexico, of fresco painting in public buildings in order to document current events. The tempera paintings are additionally significant due to the connection to the wave of art in Europe at the time: Post-Impressionism.

3. Area of Significance - COMMUNICATIONS

Criteria A - Coit Tower is associated with events that have made significant contributions to the broad patterns of our history in the category of communications. In a time before the telephone or television, the inner signal station on Telegraph Hill, a primitive way of communicating by our standards, was necessary for the basic communication to the community who were very anxious to hear about any ship vessel that may bring friends and family, news from the east, and their mail. This inner signal station, built in 1849 by George Sweeny and Theodore Baugh, founders of the Merchants' Exchange, was a small 18 by 25 foot two storey house as an observation post, and a semaphore system on its roof. The semaphore was a "high black pole and attached to it, in such a manner as to be raised or lowered at pleasure, . . . two black arms."¹⁹ The inner signal station later evolved to a more elaborate system involving an outer signal station off the Pacific coast at Point Lobos, linking Point Reyes to the north, Point San Pedro to the south, and the Farallon Islands to the west. This station served the community until an electric telegraph system was invented in 1853. It was the community's love and appreciation for the telegraph station that motivated them to purchase the property in 1876, name it Pioneer Park, and donate it to the city to insure the preservation of the station as a landmark.

4. Area of Significance - ECONOMICS

Criteria A - From an historical point of view, perhaps the most significant aspects of Coit Tower are the extensive frescoes on the interior walls of Coit Tower, depicting the social, political, and economic concerns of California in the early 1930's. The frescoes of Coit Tower form a visual historical documentation of the economic depression, a very significant period of time in the history of the United States. These frescoes are directly associated with the depression, not only because they depict scenes of life during the depression, but also because the funding for the frescoes was a result of the "New Deal," President Franklin D. Roosevelt's plan to restore the desperate economic situation of the country by employing citizens to work on Federally funded projects. Executed in 1934 by twenty-five artists, the project was funded by the Public Works of Art Project (PWAP), a program supported by the new Civil Works Administration to employ 2,500 artists and 500 laborers in an American artistic renaissance.²⁰ Some fresco artists

¹⁹J. Hittell, History of California, Vol. III, p. 349.

²⁰Masha Zakheim Jewett, Coit Tower, San Francisco: Its History and Art (San Francisco, California: Volcano Press, 1983), p. 29.

illustrated the economic situation of the world, not only capitalism and the "New Deal," but also communism.

Criteria B - In the area of economics, Coit Tower is associated with the lives of many significant persons in our past on the local and national level due to the Public Works of Art Project of 1933-34. The concept of commissioning American artists as civil servants to illustrate aspects of life in the United States in order to heal their financial malaise during the depression, all started with George Biddle. An artist himself, George Biddle had given up a law career to pursue art, was a member of a socially prominent Philadelphia family, and was a Harvard classmate of President Franklin D. Roosevelt. Biddle wrote to his former fellow schoolmate, and suggested that the government employ American artists to paint murals depicting the social ideals of the new administration and contemporary life on the walls of public buildings. Biddle was successful in convincing Edward Bruce of the Treasury Department to establish the Public Works of Art Project (PWAP). Bruce selected Forbes Watson to be the technical director for PWAP. Bruce and Watson wrote hundreds of pages of communiques, bulletins, reports, and books on the philosophy of government-supported art, social history, and public esthetics. To supervise the Northern California and Nevada PWAP committee, Bruce selected Dr. Walter Heil, newly arrived from Germany and the director of the de Young Museum in Golden Gate Park. It was Heil's task to select and supervise "worthy artists" and to choose appropriate public buildings to embellish.²¹ Arthur Brown Jr. gave his consensus to Dr. Heil stating "The primitive nature of the Coit Tower would lend itself to that sort of thing better than other public buildings."²² And then Herbert Fleishhacker recognizing the murals as a great opportunity for Coit Tower, proceeded to initiate action in having the artists proceed to paint the murals. According to Bernard B. Zakheim, one of the artists selected to paint in Coit Tower, ". . . Fleishhacker was under sharp criticism about his "last erection," the Coit Tower. So he corralled the project to put art work into the Tower in order to justify its existence."²³

J. Additional Information On:

1. Building structure or object

This structure of monumental stature embodies the distinctive characteristics of the Art Deco style with its exterior fluted shaft of textured concrete, its system of arches at the top, simple interlocking volumes at the base, its thin metal casement windows, and its sculptural exterior and interior light fixtures. However, its uniqueness and exceptional design was not always appreciated. During construction, local artists

²¹Jewett, Coit Tower, p. 30.

²²Minutes of the Second Meeting of the Regional Committee, District 15 PWAP, December 18, 1933.

²³From an interview with Bernard B. Zakheim by Lewis Ferbrache, Archives of American Art, Smithsonian Institution, San Francisco, 1964.

appealed to the Art Commission to halt construction, arguing on aesthetic grounds that the tower was too tall for the hill, and a mockery of trying to imitate a fire hose nozzle, in memory of Lillie Coit's fondness of the fire department. The architects denied such an intention, and construction continued. In 1933, Howard explained their design intent in an article in *Architect and Engineer*:

*The tower has no prototype. It is not a medieval deep to resist capture, nor a lighthouse to warn off mariners. Neither is it a clock tower nor a fanciful ebullition for a exposition. It is intended to be dignified with austerity; monumental without utilitarian function.*²⁴

2. Historic site

Telegraph Hill, the site of Coit Tower, is historically significant because of its historic contribution to the broad patterns of our history and specifically in the area of communications of San Francisco. Called "Loma Alta" (High Hill) by the early Spanish inhabitants, the hill was used in the early 1800's as a quarry for ship ballast and street paving. In 1849, two years after San Francisco took its name from the patron St. Francis of Assisi, the founders of the Merchants' Exchange built a small two storey wood structure as an observation and semaphore signalling station on the summit of the hill - hence the name Telegraph Hill. This signalling station serviced the community and the growing shipping industry of the San Francisco Bay until the invention of the electric telegraph system in 1853. For the preservation of the telegraph station as a landmark, concerned San Franciscans purchased the property, named it Pioneer Park, and donated to the City to be kept as an open space. The history of Pioneer Park on Telegraph Hill is briefly portrayed by F. Holland Dutton in the Official Program of Coit Tower at its dedication ceremony. An excerpt from this describes what happened to the site after it became Pioneer Park.

*In 1883 a company, headed by Gustav Sutro, erected the Pioneer Park Observatory, a high-class pleasure resort, and to make it accessible the Telegraph Hill Railroad was built to connect with the Omnibus Railroad Lines. A 50,000 candle power lamp was maintained in the turret and a time ball was dropped daily at noon, by which the mariners in the harbor regulated their chronometers. It was there the doughty swordsman, Duncan Ross, in full armour, stood ready to challenge all comers.*²⁵

²⁴Henry T. Howard, "The Coit Memorial Tower," *Architect and Engineer*, 115:3, p. 11.

²⁵F. Holland Dutton, "History of Pioneer Park on Telegraph Hill," Official Program, Dedication Lillie Hitchcock Coit, Tower, Sunday, October 8th, 1933.



Unfortunately, this wood constructed Pioneer Park Observatory was destroyed in a fire in the late 1800's, with only the concrete porch steps and balustrade remaining. Therefore, since two observatories were once on the site, it was natural to construct an observation tower on the site. According to the designer, Henry T. Howard:

"Telegraph Hill has always been used as a vantage point, either for signaling or for gaining a panoramic view. Why not emphasize this idea in the form of the memorial?"²⁶

²⁶Henry T. Howard, "The Coit Memorial Tower," *Architect and Engineer*, 115:3, p. 13.

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B. Consultation and Contacts

Debra Lehane, Barry Von Hugen Groth
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D. Primary Location of Additional Data

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45 Hyde Street, Suite 319
San Francisco, CA 94102
2. Bureau of Architecture
Department of Public Works
City and County of San Francisco
45 Hyde Street, Suite 300
San Francisco, CA 94102
3. San Francisco Public Library
Main Library Civic Center
Larkin and McAllister Streets
San Francisco, CA

9. GEOGRAPHICAL DATA

A. Acreage -

B. UTM Reference -

C. Verbal Boundary Description -

10. HISTORIC PHOTOGRAPHS

Photo H-1

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Unknown

Artist: Unknown

Date: August 15, 1932

Location of Original Negatives: Arts Commission of San Francisco

View: Sketch facing South

Description: Sketch for Proposed Monument for Telegraph Hill

Arthur Brown, Jr., Architect

Photo H-2

Property Name: Coit Tower

Location: San Francisco

Photographer: Unknown

Date: Unknown

Artist: Unknown

Location of Original Negatives: Arts Commission of San Francisco

View: Sketch facing South

Description: Monument for Telegraph Hill

Arthur Brown, Jr., Architect

Photo H-3

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Unknown

Date: c. Early 1930s

Location of Original Negatives: Arts Commission of San Francisco

View: Sketch facing South

Description: Just Completed Coit Tower

Prior to landscaping and removal of entrance level balustrade

Photo H-4

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Unknown

Date: c. 1934

Location of Original Negatives: Arts Commission of San Francisco

View: Facing West

Description: Aerial Photograph of Coit Tower and Surrounding Area

Worlds Fair of 1934 in background

Photo H-5

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Unknown

Date: c. 1935

Location of Original Negatives: Arts Commission of San Francisco

View: Facing West

Description: Towards Coit Tower through trees from Washington Square

11. EXISTING PHOTOGRAGHS

Photo E-1

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer in parking area facing South.

Description: Photo includes statue of Christopher Columbus and marble planter.

Photo E-2

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing North

Description: Rear elevation.

Photo E-3

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing South-east

Description: Front Entrance on the Base Level.

Photo E-4

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing West

Description: Belvedere Level, typical arch and Kalamein door.

Photo E-5

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing South-east standing on stair

Description: Lantern Level (roof)

Photo E-6

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing North-west looking towards stair.

Description: Lantern Level (roof)

Photo E-7

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: North Gallery

Description: Anne Rosenthal restoring *City Life*, Victor Arnautoff's fresco while women sitting at lunch counter watch her work.

Photo E-8

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Second Floor, Keeper's Vestibule

Description: *Outdoor Life*, fresco of Ben F. Cunningham

12. INDIVIDUALS COMPILING DOCUMENTATION

A. Firm or Association

1. Interactive Resources, Inc.
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Arts Commission of San Francisco
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3. Richard Berry Von Hugen Groth, Senior Architect
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Photo E-1

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer in parking area facing South.

Description: Photo includes statue of Christopher Columbus and marble planter.





Photo E-3

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing South-east

Description: Front Entrance on the Base Level.



Photo E-4

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing West

Description: Belvedere Level, typical arch and Kalamein door.



Photo E-5

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing South-east standing on stair

Description: Lantern Level (roof)



Photo E-6

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Photographer facing North-west looking towards stair.

Description: Lantern Level (roof)



Photo E-7

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: North Gallery

Description: Anne Rosenthal restoring *City Life*, Victor Arnautoff's fresco while women sitting at lunch counter watch her work.



Photo E-8

Property Name: Coit Tower

Location: San Francisco, California

Photographer: Ann-Marie Meenahan

Date: March 1989

Location of Original Negatives: Interactive Resources, Inc.

View: Second Floor, Keeper's Vestibule

Description: *Outdoor Life*, fresco of Ben F. Cunningham



III. EXISTING CONDITIONS

III. EXISTING CONDITIONS

The exterior of Coit Tower is in generally good condition due to the major restoration project was completed in 1988. The repair work was accomplished by the general contracting firm Nibbi-Lowe Construction under the direction of the Bureau of Architecture, Department of Public Works, City and County of San Francisco, California with consultation by the architecture and engineering firm Interactive Resources, Inc. During the development of this historic structure report, the frescos were restored by Anne Rosenthal and a team of conservators.

Coit Tower sits on top of Telegraph Hill on the north east side of the San Francisco peninsula. Moisture has accelerated the deterioration of the concrete in the past producing corroded reinforcement, spalling, cracks, and a balding dash coat.

This report assesses the existing condition of the exterior and interior of the structure, and addresses the issues of preserving its historic features from future deterioration.

A. Conservation of the Frescos

The fresco murals have had three conservation projects, 1960 with Dorothy Puccinelli Cravath, 1975 with Emmy Lou Packard, and in 1989 with Anne Rosenthal and a team of conservators for the Arts Commission of San Francisco.

In 1960, the Recreation and Park Department ordered locked glass doors to be placed in the vestibule and locked the doors to the second floor, in order to prevent tourists from entering the galleries. Dorothy Puccinelli Cravath, a local artist, restored portions of the frescos that had been damaged by vandalism. She utilized the original artists whenever she could.

In 1975, Emmy Lou Packard conducted a study (found in an appendix in this report) on expert opinions of the time on fresco conservation before preceding with the conservation project. Emmy Lou Packard was an assistant to Diego Rivera.

In June of 1987, Anne Rosenthal and Constance S. Silver prepared a report for the San Francisco Arts Commission (found in an appendix in this report). This report, "The Frescoes of Coit Tower: Pilot Conservation Studies," was written in effort to coordinate the conservation treatment of the frescos with the program of structural repair. The report describes the conservation studies and technical investigations preparatory to the development of a comprehensive conservation treatment of all of the mural paintings in Coit Tower.²

Under the supervision of the Arts Commission, the first floor fresco murals were conserved starting in September 1988 and completed in February 1989.¹ The following was the team of conservators involved in the conservation project:

Anne Rosenthal, Head Conservator, San Rafael
Jim Bernstein, San Francisco
Connie Silver, New York
Greg Thomas, Hawaii

Assisting the project: Michael Dunn, Palo Alto

Funding for the project:

National Endowment for the Arts:	\$25,000.00
Office of Historic Preservation, Parks and Recreation Department, Sacramento	\$50,000.00
	\$64,000.00 *

* includes funds for new barrier system as part of budget

Preliminary construction documents for the new barrier system around the murals have been prepared by the San Francisco architectural firm Robinson Mills + Williams.

A full extensive report will be provided by the conservation team of the treatment, problems, and recommended maintenance of the murals. This report should be completed by July 1989 and included in this historic structure report.

The Arts Commission of San Francisco commissioned the San Francisco architectural firm Robinson Mills + Williams to sensitively design a barrier to be placed in front of the murals. This design has been approved by the Office of Historic Preservation and will be installed within the near future. The design intent of the barriers was to avoid interference with the views to each mural and frame the murals along the bottom. The design intent for the fluted bronze metal barrier was to incorporate the Art Deco features of the building. Glass panels were design to be placed over the murals on either side of the main entrance. It was discovered that those particular murals suffered from extensive damage due to their close proximity to the front entrance and the toilet rooms. (Reduced copies of the drawings for the barriers are included in this report.)

¹Information on the Coit Tower Conservation Project was provided from Debra Lehane, Collections Manager of the Arts Commission of San Francisco.

B. Past Alterations, Preservation, and Restoration

1. 1980 ALTERATIONS

The Bureau of Architecture, Department of Public Works, City and County of San Francisco, has indicated that there have been many minor alterations to the Coit Tower that may or may not have been documented. In 1980, there were many alterations, primarily to update the elevator to building code, install heating units, install cameras for security, turnstiles, and Gift Shop remodeling.

2. 1985 INTERACTIVE RESOURCES, INC. RESTORATION PROJECT

Interactive Resources, Inc. conducted an investigation of Coit Tower that included a field survey of the base walls, the Belvedere level, and the roof level.² From the field survey recommended repairs was outlined to restore the integrity of the structure and an estimate of repair costs was tabulated.

The repairs completed in 1988 include³:

a. Cracks - The cracks at the time ranged from hairline horizontal cracks in walls, many feet long, to 1/4 inch wide vertical cracks, 8 feet long due to corrosion-related delamination from freeze-thaw cycles, the temperature differentials between the exterior and the interior, and general movement of the building. The restoration techniques for the cracks depended upon the severity of the crack. Hairline cracks (less than 1/32 inch wide) were repaired with a sealing material. Major cracks were opened up to inspect and treat the corroded reinforcement, then injected with a sealing material, and in severe cases patched, similar to the spalls.

b. Spalls - An estimated 5,000 spalls, or popouts about 3 inches in diameter were repaired by hammering out the loose, disintegrated concrete that surrounded the corroded form tie or reinforcement, cutting off the corroded steel, and providing a keyed patch. All existing patches were removed and reinstalled.

²Bureau of Architecture, Department of Public works, City and County of San Francisco, and Interactive Resources, Inc., "Report on Deterioration of Exterior Components at Coit Tower," for the Recreation and Parks Department, City and County of San Francisco, May 1985, p. 1. A copy of this report is located in an appendix in this report.

³Bureau of Architecture, Department of Public Works, City and County of San Francisco, Specifications and Drawings for Coit Tower Restoration (Repairs, Coating, Roofing, and Elevator Work), June, 1986. A copy of this is located in an appendix in this report.

c. Surface Coating - The surface coating, called "dash coat" by the original architect, was severely deteriorated. The restoration included sandblasting the entire building before any repairs. This provided a coarse surface that assisted in adhering the new dash coat.

d. Balustrade - The balustrade was severely deteriorated. The original balustrade was completely removed. A mold that matches the original was constructed, then a new precast reinforced concrete balustrade was provided.

e. Upper Roof Level - The roof level was repaired according to the recommendations in the report's analysis for repair of the concrete surfaces of the stair and the ceilings in the archways.

Repairs yet to be completed:

a. Lobby Tile Crack - The report included recommendations for the replacement of quarry tiles at a severe crack near the West wall of the Lobby. It also suggested to investigate the soil below the slab to determine if additional settlement may occur.⁴

b. Soil-Related Damage - According to the results of the soil investigation for the report, soil-related damage is perhaps to blame for the movement in the retaining walls, walkways, and planters. This movement resulted in cracks throughout and displacement of retaining walls. The recommendations included the removal of the dirt from the planters, cleaning and enlarging the weep holes, lining the planter with a pan, and treating the exposed concrete with the dash coat. It also recommended the replacement of the damaged walkways and retaining walls, with the inclusion of more porous rock fill and new drains.⁵

3. 1985 TECHNICAL ROOF SERVICES, INC.

This roof survey report was completed April of 1985 and was included in the Interactive Resources, Inc. Report on Deterioration of Exterior Components at Coit Tower. It included a summary of observations of all the roof surfaces and interior leakage, applicable photographs, a discussion and corrective considerations, and anticipated budgets for individual roof areas.

⁴The Lobby floor cracks have apparently not been repaired as of this historic structure report.

⁵The repairs for the soil-related damage including the crack and displacement of the walkways, planters and retaining walls has apparently not been completed as of this historic structure report.

4. 1986 INVESTIGATION OF THE DASH COAT COLOR, COMPOSITION, AND APPLICATION

The Historical Architect along with the Bureau of Architecture, reviewed the new dash coat and its application. The composition, texture, and color of the dash coat was thoroughly investigated before the final material was selected.

C. Mechanical, Plumbing Systems, and Water Tanks

It is crucial for the sake of the murals, that the mechanical and plumbing systems be analyzed for an appropriate long term repair approach. The tanks are severely corroded and there is a film deposit on the surface of the water inside. The water tanks should be emptied and an alternate source of water used to prevent any chance of leakage.

D. Conditions Not Included In This Report

The structural, electrical, and landscaping conditions, and the alterations to the Keeper's Apartment have not been included in this report. This is not to say that all these items should not be investigated and preserved. However, it appears that the Keeper's Apartment has gone through many undocumented changes. Also, the Keeper's Apartment is not open to the public. Therefore, it has been determined by the Historical Architect that the Keeper's Apartment is not historically significant due to the fact it has had major modernization alterations.



IV. EXTERIOR

IV. EXTERIOR

A. Masonry

1. BASE LEVEL EXTERIOR WALLS, TERRACE RETAINING WALLS, AND PLANTERS

Date: 1933, 1988

Description and Condition: The concrete features of the base of Coit Tower appear to be in generally good condition. There are only minor fading blotches of the dash coat in areas effected by water runoff. Corners and seams appear to be crisp. The retaining walls and planters appear to be in good condition with the exception of graffiti on the retaining wall in front of the entrance steps. The coloring and texture of the dash coat appears to be consistent with the dash coat prior to restoration. There are stains on the new dash coat from water runoff from weep holes and scuppers. There appears to have been settling with some of the retaining walls; some walls unevenly meet at expansion joints. Presently there are extraneous aluminum panels covered with dash coating covering the patio area of the Keeper's apartment. They were added for security reasons. Photo nos.: E-1 thru E-8

Arthur Brown, Jr. architectural drawing nos.: 1 thru 3

Arthur Brown, Jr. specs page nos.: 5-1 and 5-2
Interactive Resources, Inc. Report on Deterioration of Exterior Components at Coit Tower for the City and County of San Francisco, May 1985 (hereafter known as "IRI Report on Deterioration") page nos.: 6 thru 8, A-6 thru A-8, E-3, M-1 thru M-3

Preservation Treatment: The terrace retaining walls and planters should be periodically maintained only when necessary by removing the stains with the gentlest methods possible. The Historical Architect recommends the use of *Sure Klean* "Defacer Eraser" or "Graffiti Control"



E-1. Front North Elevation.
(53-22)



E-2. Base Level.
(84-5A)

products by the company ProSoCo, Inc. in Kansas City, Kansas. Laboratory tests should be performed on sample finishes with the Graffiti Control material to assure that the vapor transmission characteristics remain the same. (There have been previous tests to determine the vapor transmission of the original material and the new texture applied.) The Bureau of Architecture has a dash gun for future maintenance of the dash coat. This dash gun must be used sparingly, and only after unsuccessful attempts with chemical cleaners. There are a few cracks that should be periodically monitored. Repair may be necessary only in extreme cases utilizing the same methodology as outlined in the IRI report. The shifting of the retaining walls at the expansion joints should be monitored. If there is continuously no change in the amount of wall movement, the retaining wall can remain. It is likely that the wall settled into place shortly after construction due to the weight of the building. Corrective measures should be taken only if the wall is moving at a continual rate. Then the walkway in front of the wall can be removed, the fill changed to a lighter, more porous fill, the retaining wall moved back into place, then reconstruct the walkway, duplicating the original walkway. Tile scuppers should replace the weep holes to enable the water runoff to fall in the plants, not along the surface of the planter. The security panels covered with dash coating should be removed and replaced with a more sensitive design.

The formula (color and chemical analysis) of the dash coat should be placed at the conclusion of this section for future reference along with manufacturers specifications and instructions.

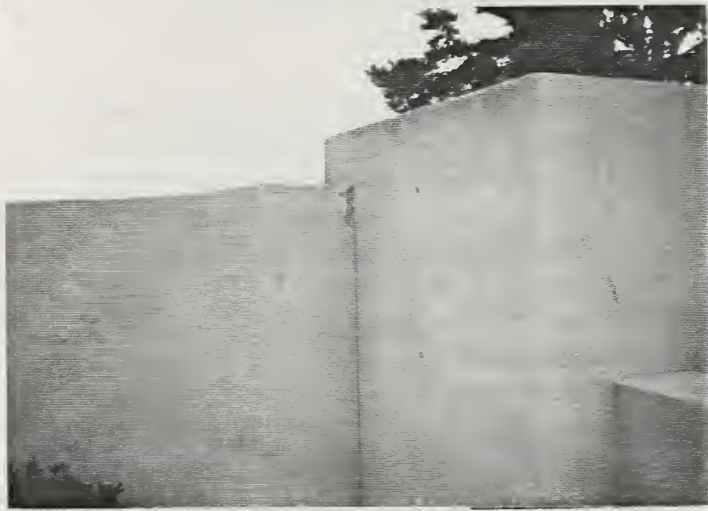
See pp. 13 - 15, Sec. of Interior Guidelines and Preservation Briefs #1 and #15.



E-3. Dash coat after attempt at removing stain. (52-17)



E-4. Graffiti and rain on the front retaining wall. (48-4)



E-5. An area of planters that requires repair. (49-7)



E-6. Condition of steps at parking lot retaining wall. (54-24)



E-7. Aluminum panel with dash coating. (61-22)



E-8. Retaining wall and planters after a rain. Notice stain under weep hole. (49-8)

2. MARBLE PLANTER FOR THE
COLUMBUS STATUE
Date: 1933

Description and Condition: The marble is dirty from atmospheric gases and general use. Some corners and seams are cracked.

Photo nos.: E-9, E-10

Arthur Brown, Jr. architectural drawing no.: 1

Preservation Treatment: The marble should be cleaned by a professional stone conservator. See pp. 13 - 15, Sec. of Interior Guidelines, Preservation Brief #1, and Preservation League, Technical Series/No. 5.



E-9. Marble planter in
center of parking lot.
(39-21A)



E-10. Detail of condition
of marble. (48-2)

3. ENTRANCE PORCH, STEPS, WALKWAYS, AND REAR SOUTH PORCH

Date: Late 1800's, 1931, 1933

Description and Condition: Parts of the entrance porch and steps were located on Telegraph Hill before Coit Tower was constructed. They were the steps to an observatory, a wooden structure that had burned down in the late 1800's. Therefore the porch and steps have great historical significance and should be preserved. The front porch has been greatly altered with the addition of the revolving door. Concrete steps replaced brick steps, and consumed a portion of the pattern on the concrete porch. The concrete porches, steps, and paved walkways around the tower and parking lot appear to be worn and cracked in places with some vegetation growing in the cracks. The asphalt walkway on the south side of the tower, leading to the stone stairway, appears to be in good condition. The stairway on the west side of the tower, leading to the road, has field stone steps and retaining walls with metal pipe railing. The field stones appear to be in excellent condition and may not require maintenance. Photo nos.: E-11 thru E-15

Arthur Brown, Jr. architectural drawing no.: 1

Arthur Brown, Jr. schematic design drawing of the ground floor and site. Portion of Telegraph Hill Showing Location of State Engineer Monument. IRI Report on Deterioration page nos.: 8, E-1 thru E-5, and M-1 thru M-3

Preservation Treatment: The preservation methodologies for the concrete porch, walkways, and stairs are outlined in the 1985 IRI report. Prior to restoration, further investigation should be conducted in order to determine the cause of the cracks. At that time the preservation treatment could be determined. When the funds are available, the porch should be restored to its original configuration. After removing the concrete steps, the brick steps and concrete porch pattern should be reconstructed.

See pp. 13 - 15, 28, and 29, Sec. of Interior Guidelines, Preservation Briefs #1 and #15, and Preservation League, Technical Series/No. 5.4.



E-11. Entrance Porch with new concrete steps on the left, covering red concrete pattern. (46-21)



E-12. Detail of Entrance steps. (Photo taken after a rain.) (48-1)



E-13. Rear South Elevation. (52-18)



E-14. Detail of retaining wall and walkway at Rear South Porch. (50-11)



E-15. Stone steps located on the west side of Telegraph Hill. (46-22)

4. CAST STONE GRILLES

Date: 1933, 1988

Description and Condition: The cast stone grilles have been covered with a new dash coat that appears to match the original in texture and color. The ornamental holes of the grilles have been coated in such a way that appears to effect the shape of the holes. The corners of the holes do not appear to be crisp. The seam around the grilles appears to be a caulking material. From the photographs taken prior to the restoration, there appears to be no seam. It appears the architect intended the grille to be hidden behind the dash coat. There is an apparent need for the caulking around the grille, however, an inconspicuous caulking is preferred.

Photo no.: E-16

Arthur Brown, Jr. drawing no.: 3, 5

Arthur Brown, Jr. specs page no.: 4-1 and 4-2

IRI Report on Deterioration page no.: E-2 thru E-4

Preservation Treatment: Further investigation should be conducted to find documentation as to the original appearance of the stone grilles, i.e. whether there was a seam around the grilles. When it is necessary to replace the caulking, the caulking should be replaced with a thinner strip, matching the color of the dash coat.

See pp. 13 - 15, Sec. of Interior Guidelines, Preservation Brief #1, and Preservation League, Technical Series/No. 5.



E-16. Cast stone grille,
toilet window
beyond. (50-10)

5. CAST STONE TABLET AND FASCES

Date: 1933, 1988

Description and Condition: The cast stone tablet of a phoenix and cast stone fasces on both sides of the tablet have been covered with a new dash coat that appears to match the original in color. The dash coat texture on the ornamentation however, appears to be rougher than the historic photos portray. It was the intention of the original architect to apply the dash coat on all of the ornaments. The original architect's specifications required "sharp well defined surfaces and arises."

Photo no.: E-17

Arthur Brown, Jr. specs page no.: 4-1 and 4-2

Preservation Treatment: The ornaments should only be cleaned when necessary by a stone conservator.

See pp. 13 - 15, Sec. of Interior Guidelines, Preservation Brief #1, and Preservation League, Technical Series/No. 5.



E-17. Detail of Phoenix and Fasces. (75-5A)

6. TOWER SHAFT
Date: 1933, 1988

Description and Condition: The condition of the tower shaft appears to be good. The corners of the fluted shaft appear to be crisp.

Photo no.: E-18, E-19

Arthur Brown, Jr. drawing nos.: 3, 3a

Arthur Brown, Jr. specs page nos.: 3-8, 5-2

IRI Report on Deterioration page no.: 10, E-1 thru E-4, F-1 thru F-3, G-1 thru G-4, and H-1 thru H-2

Preservation Treatment: When the shaft shows signs of possible deterioration, it can be repaired using the same materials and methodology used on the restoration as recommended by the 1985 IRI report.

See pp. 13 - 15, Sec. of Interior Guidelines and Preservation Brief #1.



E-18. Tower shaft. (85-8A)

7. BELVEDERE LEVEL

Date: 1933, 1988

Description and Condition: The concrete features of the Belvedere level appear to be in excellent condition. The dash coat appears to be consistent in texture and color with the original dash coat. The metal light fixture/floor drains appear to be in good operating condition. The incandescent light fixtures in the arches appear to be corroded and inoperable.

Photo no.: E-20, E-21

Arthur Brown, Jr. drawing no.: 2, 6, 7

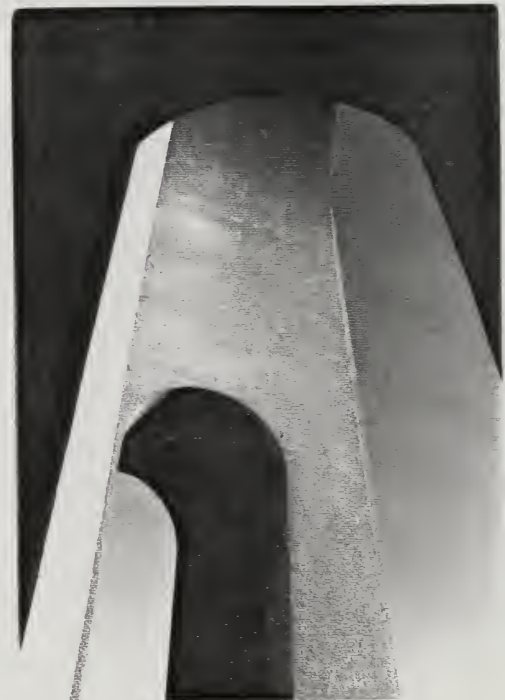
IRI Report on Deterioration page no.: 11, 12, E-1 thru E-4, F-1 thru F-3, G-1 thru G-4, H-1 thru H-2, and J-1

Preservation Treatment: The light fixture/floor drains should be periodically inspected in order to prevent water leakage into the tower. The incandescent fixtures should be repaired or replaced in kind only if absolutely necessary. The dash coat should be periodically maintained only when necessary by removing the stains with the gentlest methods possible. The Historical Architect recommends the use of *Sure Klean* "Defacer Eraser" or "Graffiti Control" products by the company ProSoCo, Inc. in Kansas City, Kansas described on pages IV-1 and IV-2.

See pp. 13 - 15, Sec. of Interior Guidelines and Preservation Brief #1.



E-20. View of Belvedere Level. (36-12A)



E-21. Dash coat. (88-26)

8. BALUSTRADE

Date: 1988

Description and Condition: According to the original architect's specifications, the balustrade sections were intended to be cast stone (p. 4-2). According to the architect's letter to the contractor dated July 22, 1933, the balusters were plain cast cement and not cast stone as specified. The balusters were replaced in 1988 with matching precast reinforced concrete units assembled on the ground and lifted into place. They were covered with a dash coat similar to the remaining structure. The balustrade presently appears to be in excellent condition.

Photo no.: E-22

Arthur Brown, Jr. drawing no.: not available

Arthur Brown, Jr. specs page no.: 4-1 and 4-2

IRI Report on Deterioration, page: 11, E-1 thru E-4, F-1 thru F-3, G-1 thru G-4, H-1 thru H-2, and J-1

Preservation Treatment: The dash coat should be periodically maintained only when necessary by removing the stains with the gentlest methods possible.

See pp. 13 - 15, Sec. of Interior Guidelines and Preservation Brief #1.



E-22. Detail of balustrade.
(37-13A)

9. LANTERN LEVEL

Date: 1933, 1988

Description and Condition: The concrete features of the Roof Level appear to be in good condition. The dash coat appears to be consistent in texture and color with the original dash coat. There are stains from the scuppers. The metal cover plates where there once were light fixtures have been covered with the dash coat.

Photo no.: E-23, E-24

Arthur Brown, Jr. drawing no.: 2, 9

IRI Report on Deterioration, page: 11, E-1 thru E-4, F-1 thru F-3, G-1 thru G-4, H-1 thru H-2, and K-1

Preservation Treatment: There should be investigation about the light fixtures that once were on the roof. The stains from the scuppers and atmosphere gases should be monitored and periodically cleaned.

See pp. 13 - 15, Sec. of Interior Guidelines and Preservation Brief #1.



E-23. Water stains from scuppers. (34-1A)



E-24. Detail. (69-24A)

10. PUMP HOUSE

Date: 1933

Description and Condition: The pump house does not appear to have the dash coating. The house is built into the hill. Vines have grown over the pump house. There appears to be water draining from the door. Perhaps the roof is in need of repair. It is still used today to provide water for the tower and to irrigate the Pioneer park.

Photo no.: E-25

Preservation Treatment: The graffiti should be washed off. The Historical Architect recommends conducting a vapor transmission characteristics evaluation utilizing laboratory tests. The *Sure Klean* "Defacer Eraser" or "Graffiti Control" products by the company ProSoCo, Inc. in Kansas City, Kansas could then be used matching the vapor transmission of the existing surfaces, as recommended on pages IV-1 and IV-2. The roof should be investigated as well as the interior of the pump house to estimate the damage to the pump. See pp. 13 - 15, Sec. of Interior Guidelines.



E-25. Pump house. (85-7)

B. Architectural Metals

1. COLUMBUS STATUE

Date: 1957

Description and Condition: Artist: Vittorio DiColbertalbo. The bronze statue of Christopher Columbus was a gift to the city by the Italian-American Society. The dedication ceremony was on Columbus Day in 1957. The statue appears to be in good condition.

Photo no.: E-26

Preservation Treatment: The bronze statue should be cleaned by a bronze conservator.



E-26. Statue in front of Coit Tower. (85-6)

2. BRONZE DEDICATION
PLACQUE FOR LILLIE COIT
Date: 1945

Description and Condition: The placque appears to be in good condition. April 5, 1945, Minutes of the Recreation and Park Commission state:

The Secretary was directed to acknowledge receipt of a plaque honoring Lillie H. Coit, forwarded by Mary Kate Hunter, Palestine, Texas.

Photo no.: E-27

Preservation Treatment: The bronze plaque should be cleaned by a bronze conservator.



E-27. Bronze plaque.
(84-1)

3. EXTERIOR IRON RAILINGS AT
GALLERY GLASS DOORS AND
ROOF LEVEL

Date: 1933

Description and Condition: The exterior iron railings have many coats of paint. The detailing and sharp edges have been lost due to the many layers. Otherwise they appear to be in good condition. According to Arthur Brown Jr.'s specifications, the exterior rails were intended to be galvanized iron work, primed, and finished "with four coats of aluminum paint." Therefore, the original color for the exterior rails was aluminum (an aluminum color--silver).

Photo no.: E-28, E-29

Arthur Brown, Jr. drawing no.: 5

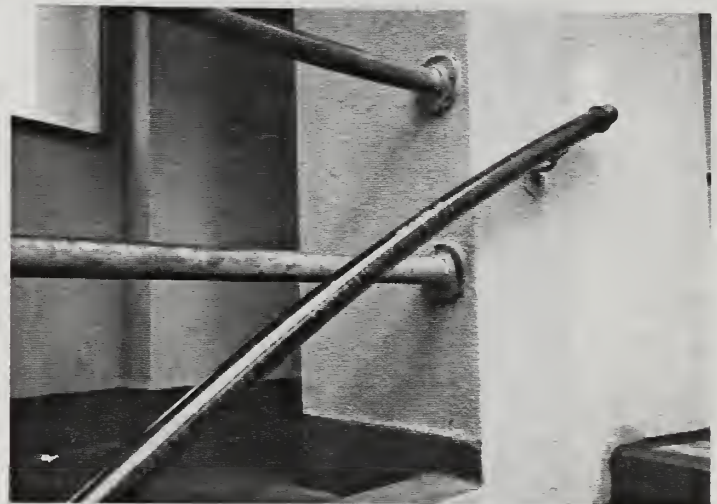
Arthur Brown, Jr. specs page nos.: 11-1, 11-2 and 15-4

Preservation Treatment: According to the architect Arthur Brown, Jr. drawings and specifications, the railings were to be ". . . galvanized, . . . cleaned off, smoothed down, left free from all roughness and finished with an even color." The existing paint should be removed, primed, and replaced with four coats of aluminum paint.

See pp. 19 - 21, Sec. of Interior Guidelines.



E-28. Railing at Rear
South Porch. (50-12)



E-29. Railing at Lantern
Level. (69-23A)

4. EXTERIOR METAL DOORS AND CASING

Date: 1933

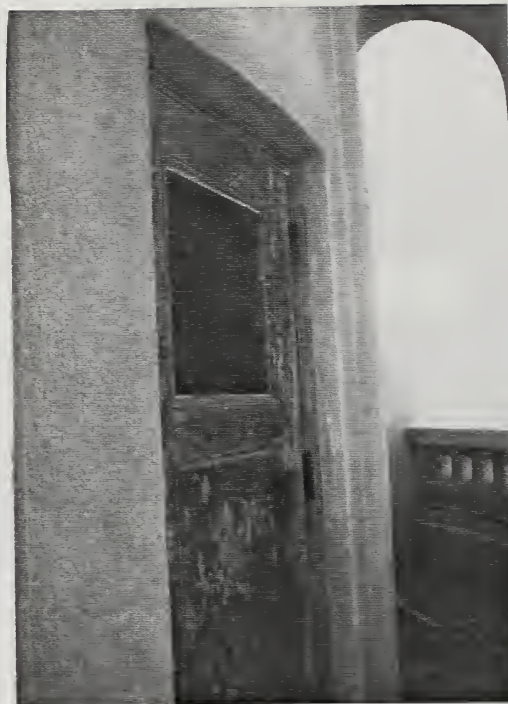
Description and Condition: According to the architect Arthur Brown, Jr.'s specifications, five doors and casings were "Kalamein" doors. These doors are constructed of wood with copper coverings that are coated with a clear lacquer. The door for the Machine Room with an air vent, is metal covered on the back and the inner trim is metal covered. According to the specifications, the thresholds are extruded or cast bronze. The hardware is bronze.

Photo no.: E-30, E-31

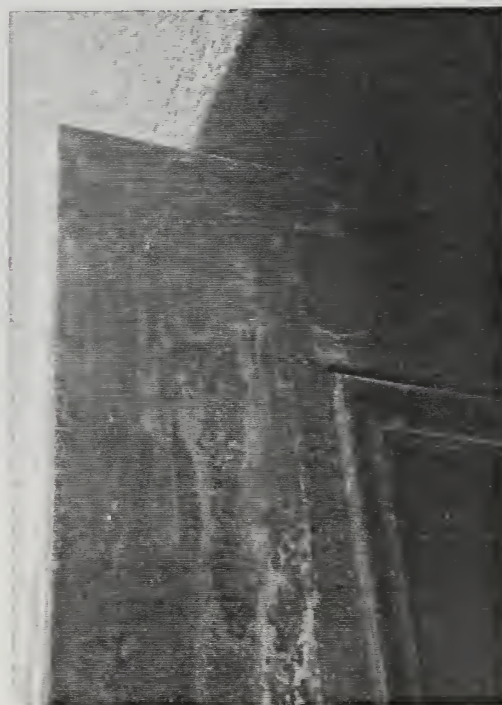
Arthur Brown, Jr. drawing nos.: 6, 8

Arthur Brown, Jr. specs no.: 6-5, 11-3

Preservation Treatment: After sufficiently testing the doors, the copper should be cleaned with an appropriate chemical method avoiding abrasive methods and finished with a clear coating to match the original transparent lacquer finish. See pp. 19 - 21, Sec. of Interior Guidelines and Preservation Brief #4 (under "Metal").



E-30. Belvedere Level. (38-17)



E-31. Detail of door. (58-12)

5. ORNAMENTAL EXTERIOR
LIGHT FIXTURE
Date: 1933

Description and Condition: This light fixture is basically unseen due to the revolving door. It is historically significant because it is a fine example of the "Art Deco" style that was prevalent in this country at the time of the construction of Coit Tower.

Photo no.: E-32, E-33

Preservation Treatment: The wiring for the historic hanging light fixtures should be checked and the fixtures cleaned to remove corrosion by a professional in historic light fixtures, such as Nowell's Victorian Lighting (415/332-4933). See pp. 19 - 21, Sec. of Interior Guidelines.



E-32. Ornament above
revolving door.
(74-1A)



E-33. Detail of ornamental
light fixture (83-00)

D. Roofs

1. BASE LEVEL

Date: 1933, 1988

Description and Condition: According to the Arthur Brown, Jr.'s drawings and specifications, the original roof covering was quarry tile bedded in concrete over a split slab construction. The new flooring is smooth elastomeric membrane over insulation over the structural slab. Before the 1988 restoration, the roof was covered with a three-ply asphalt and gravel built-up roof. The ballast, membrane, and tile were removed during restoration and replaced with new elastomeric membrane in a color perhaps similar to the original quarry tile. The elastomeric was installed over insulation therefore minimizing the removal process when the original quarry tile is reinstalled.

Photo no.: E-34 thru E-39

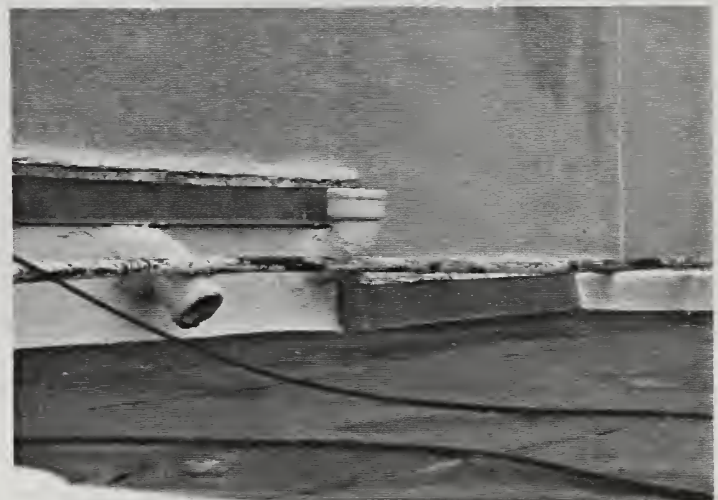
Arthur Brown, Jr. drawing no.: 2

Preservation Treatment: The roof should be monitored for any signs of deterioration or leakage. The manufacturers for the "Dex-O-Tex Weatherwear" roof covering recommend after a period of weathering or traffic (generally several years) apply roller coat of surface dressing. The roof drains should be monitored and repaired when necessary. When funds are available, the quarry tile should be reinstalled over a waterproof membrane. The original quarry tiles were not installed adequately to prevent water from penetrating through to the structure. When the Base Level deck is open to the public, the wood decking in the Keepers Area should be removed.

See pp. 22 and 23, Sec. of Interior Guidelines and Preservation Brief #4.



E-34. View of roof over galleries. (61-23)



E-35. Detail of flashing and miscellaneous pipes. (60-20)



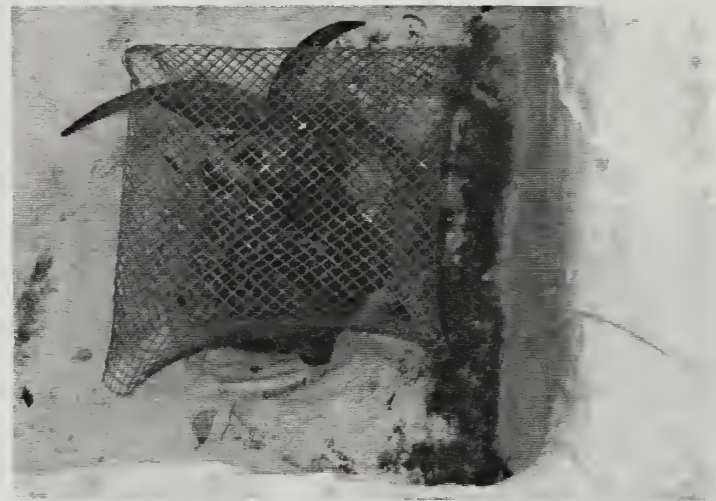
E-36. Detail of flashing. (60-17)



E-38. Roof over front entrance door. (60-19)



E-37. Wood decking on roof near Keeper's Apartment. (64-2A)



E-39. Roof drain on roof over entrance door. (61-21)

2. BELVEDERE AND LANTERN LEVEL

Date: 1933, 1988

Description and Condition: The new flooring is smooth elastomeric membrane similar to the new roofing material for the Base Level roof. According to the architect Arthur Brown, Jr.'s drawings, the original floor material was a quarry tile, similar to the quarry tile used on the other roof surfaces. At some point the quarry tile was covered with a membrane material. A new elastomeric membrane was installed over the existing tile and membrane during restoration, in the same color as the previous membrane.

Photo no.: E-40, E-41

Arthur Brown, Jr. drawing no.: 2, 6

Report by Technical Roof Services, Inc., page no.: 18 of 32

Preservation Treatment: The roof and the roof drain/light fixtures should be monitored for any signs of deterioration or leakage. When funds are available, the quarry tile should be reinstalled over a waterproof membrane. The original quarry tiles were not installed adequately to prevent water from penetrating through to the structure.

See pp. 22 and 23, Sec. of Interior Guidelines and Preservation Brief #4.



E-40. Belvedere Level roof. (66-11A)



E-41. Roof at Lantern Level after rain. (70-27A)

E. Windows

1. GALLERY GLASS DOORS

Date: 1933, 1988

Description and Condition: ". . . the thin profiles of metal windows contributed to the streamlined appearance of the Art Deco, Art Moderne, and International Styles, among others." states the Preservation Brief #13. There are three sets of glass doors, on the east, south, and west elevations. There are three approximately 8 foot sections, 10 foot 6 inches in height within each set. These gallery glass steel sash doors are in fair condition. The sashes have several coats of paint that are presently peeling off, exposing the steel. Through the years, broken glass panes have been replaced with wire glass. According to Arthur Brown, Jr.'s specifications, all metal sash and frames, were to be primed and have four coats of aluminum paint. The threshold is bronze and the hardware has a bronze finish.

Photo do.: E-42

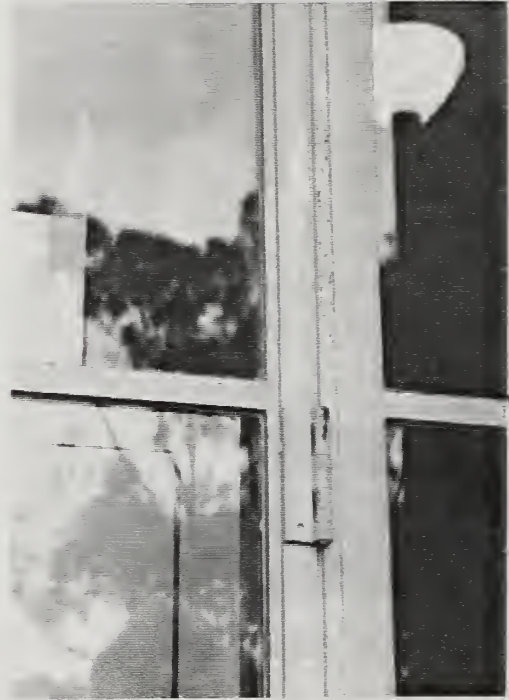
Arthur Brown, Jr. drawing no.: 5

Arthur Brown, Jr. specs page no.: 12-1, 12-2, 15-4

Soule' Steel Co. drawing no.: 2 of 2

Preservation Treatment: If over 15 mil thick, the paint and light rust should be removed to 4 mil or less, exposed metal primed with rust inhibiting primer, missing screws or fasteners replaced, hinges cleaned and lubricated, then steel sections repainted with four coats of aluminum paint. A test should be conducted to determine the original color and content of paint. Preliminary testing has shown an aluminum color. (See photo E-42) A thorough explanation of the cleaning of metal windows is found in the Preservation Brief #13. The wire glass is a substitute material for a replacement part that does not convey the visual appearance of the surviving parts of the Gallery glass doors. The wire glass should be replaced with clear laminated glass.

See pp. 25 and 26, Sec. of Interior Guidelines, and Preservation Brief #13.



E-42. Detail of Gallery glass and metal doors. Scratched paint reveals aluminum color. (85-05)

2. GALLERY CASEMENT WINDOWS

Date: 1933, 1988

Description and Condition: The narrow steel casement windows in the gallery have primary historical significance and should be preserved. They are 9 inches wide and 4 feet in height and have heavy "statuary bronze" finished hardware. According to Arthur Brown, Jr.'s specifications, all metal sash and frames, were to be primed and have four coats of aluminum paint. The windows appear to be in fair condition with many areas of rust. When the casement windows broke, they were replaced with wire glass.

Photo no.: E-43, E-44

Soule' Steel Co. drawing no.: 1 of 2

Preservation Treatment: The steel windows should be thoroughly cleaned, the paint and rust removed, exposed metal primed with rust inhibiting primer, missing screws or fasteners replaced, the hinges cleaned and lubricated, then repaint the steel sections with four coats of aluminum paint. The steel windows should be tested before removing the rust with chemicals. A test should be conducted to determine the original color and content of paint. A preliminary color test was conducted and concluded that the original color may have been an aluminum color. A thorough explanation of the cleaning of metal windows is found in the Preservation Brief #13. The replacement of the clear glass with wire glass decreases the historical integrity of the building. The wire glass should be replaced with clear laminated glass.

See pp. 25 and 26, Sec. of Interior Guidelines, and Preservation Brief #13.



E-43. Gallery window. (78-18A)



E-44. Detail of sash. (77-15A)

3. TOILET ROOM, TOWER SHAFT,
AND KEEPERS ROOM STEEL
WINDOWS

Date: 1933, 1988

Description and Condition: The toilet room, tower shaft, and Keeper's room steel windows are secondary. Since they are not readily seen by the viewer, their historic importance is minimal. The toilet room windows are painted and in good condition. There is one window in both Men's and Women's toilet room. They are 1 foot 6 inches wide and 2 foot 6 inches high. They are hinged at the bottom and have a bronze catch on the top. There are cast stone grilles beyond each window. The narrow steel windows in the tower shaft are 6-3/4 inches wide and 3 feet high. The closure hardware is on the top, and they are hinged on the bottom. The Keeper's room windows have been altered.

Photo no.: E-45, E-46

Arthur Brown, Jr. drawing no.: 5, 6

Soule' Steel Co. drawing no.: 1 of 2

Preservation Treatment: The steel windows should be thoroughly cleaned, the paint and rust removed, exposed metal primed with rust inhibiting primer, missing screws or fasteners replaced, the hinges cleaned and lubricated, then repaint the steel sections with four coats of aluminum paint. When the public is allowed on the base level roof deck, the windows of the Keeper's apartment should be restored or redesigned to a more appropriate configuration. A thorough explanation of the cleaning of metal windows is found in the Preservation Brief #13. See pp. 25 and 26, Sec. of Interior Guidelines, and Preservation Brief #13.



E-45. Toilet Room. (81-29A)



E-46. Keeper's area. (62-24)

4. BELVEDERE LEVEL STEEL
WINDOWS
Date: 1933

Description and Condition: The Belvedere level has one round steel window, 3 foot 6 inches in diameter. It is divided in the middle with three panes on the top and three panes on the bottom. The window opens from the top with a bronze catch and is hinged in the middle. It has many layers of paint. The other Belvedere windows are three fixed windows, 1 foot 6 inches wide and 2 foot 6 inches high. These windows appear to be severely rusted.

Photo no.: E-47, E-48

Arthur Brown, Jr. drawing no.: 7

Soule' Steel Co. drawing no.: 1 of 2

Preservation Treatment: The steel windows should be thoroughly cleaned, the paint and rust removed, exposed metal primed with rust inhibiting primer, missing screws or fasteners replaced, the hinges cleaned and lubricated, then repaint the steel sections with four coats of aluminum paint. The steel windows should be tested before removing the rust with chemicals. A thorough explanation of the cleaning of metal windows is found in the Preservation Brief #13. At this time, the purpose is unknown for the rusted safety bars installed over the dash coat. The bars should be removed and a safety measure should be redesigned. See pp. 25 and 26, Sec. of Interior Guidelines, and Preservation Brief #13.



E-47. Belvedere Level.(71-31A)



E-48. Rusted metal bars.(67-14A)

5. LANTERN LEVEL APPLIED
STEEL WINDOWS
Date: 1981

Description and Condition: The metal frame fixed windows on the Roof Level are not original. They were added in 1981 to prevent people from falling through. The plastic glass is scratched but otherwise in good condition.

Photo no.: E-49

Preservation Treatment:

See pp. 25 and 26, Sec. of Interior Guidelines, and Preservation Brief #13.



E-49. Metal fixed windows, Lantern Level. (89-34)

F. Entrances and Porches

1. FRONT ENTRANCE REVOLVING DOOR

Date: 1933-?

Description and Condition: There presently is a revolving door that replaced the original double doors. At this time, it is unknown when the front doors were removed. The revolving doors protrude out into the front porch and have been fixed in place. The brick steps had to be replaced with a concrete platform to hold the revolving door, and new concrete steps were constructed out onto the concrete porch. The revolving doors hide the dedication plaque of Lillie Coit on the wall left of the doors.

Photo no.: E-50, E-51

Arthur Brown, Jr. drawing nos.: 3 and 4

Arthur Brown, Jr. specs page no.: 6-1 thru 6-3, and 15-5

Preservation Treatment: The revolving doors should be removed. The original brick stairs, sunken mat, and entrance doors should be reconstructed according to the Arthur Brown Jr.'s architectural drawings and specifications. It was intended to paint the front doors two colors, one color for the stiles and rails, one color for the panels and molds. The paint for the doors was to be opaque and finished flat.

See pp. 16 - 18, 28, and 29, Sec. of Interior Guidelines and Preservation Brief #10: Exterior Paint Problems on Historic Wood.



E-50. Entrance alterations. (85-8)



E-51. Detail of handle. (75-7A)

3. FLUTED COLUMNS

Date: 1933, 1988

Description and Condition: The fluted columns are historically significant features of the building and should be preserved. They are presently in excellent condition.

Photo no.: E-53

Arthur Brown, Jr. drawing no.: 5

Preservation Treatment: The columns should be preserved and cleaned only when absolutely necessary with method similar to the base walls. See pp. 28 and 29, Sec. of Interior Guidelines.



E-53. Detail of fluted column at Front Entrance. (75-6A)



V. INTERIOR

V. INTERIOR

A. Vestibule Date: 1933

Photo nos.: I-1, I-2

Arthur Brown, Jr. architectural drawing nos.: 2, 4, 8



I-1. Grille doors. (During fresco restoration)
(76-10A)



I-2. Grille doors. (76-9A)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	12" x 6" quarry tile	good	Clean. Remove heavy wax build-up.
BASE	6" quarry tile	good	Clean.
WALL	frescos painted plaster	excellent fair	Frescos cleaned by conservator only. Clean plaster with gentlest method possible or repaint with paint formulated to match original color and finish.
CEILING	concrete	fair	Remove paint to smooth surface and repaint in original wheat color with terra cotta border. Conservators should protect murals during the repainting of adjacent surfaces.
DOORS	wood grille	good	Glass panes inside operable grille panels. Double doors painted with many coats of brown paint that appear to effect the details and sharp corners of the grille. Clean Hardware. Strip to less than 4 mil and paint original dark aqua green color.

NOTE: A laboratory paint analysis should be conducted to investigate original color for the interior doors and trim. All doors should be restored by removing all layers of paint and repaint with an accurate color after a paint process is determined. The original color appears to be the dark aqua green color painted on the door inside the tower above the second floor.

B. Elevator Lobby
Date: 1933, 1980

Photo nos.: I-3, I-4

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-3. Ornamental light fixture. (56-02)



I-4. Door to stair, turnstiles.(56-01)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	12" x 6" quarry tile cement border	good	Clean. Remove heavy wax build-up.
BASE	6" quarry tile	good	Clean.
WALL	paintings on canvas painted plaster	excellent good	Paintings cleaned by conservator only. Clean or repaint walls with paint formulated to match original color and finish.
CEILING	acoustical ceiling tiles	fair	Remove acoustical ceiling. Clean and repair. Repaint to original color.
DOORS	solid wood double doors,	good	Arthur Brown, Jr. drawings indicate original intention to have wood grille doors in the elevator lobby. Presently, there are double solid wood doors to stairs, one metal elevator door, and solid double doors to gift shop. Clean hardware. Repaint original door color.
FIXTURES	metal ceiling hung	good	Excellent example of style "Art Deco." Wiring for hanging fixtures should be checked and fixtures cleaned to remove corrosion by a professional in historic light fixtures, such as Nowell's Victorian Lighting (415/332-4933).
OTHER	turnstiles	fair	Replace with more appropriate system compatible to the historic integrity of the building.

C. Elevator

Date: 1933

Photo no.: I-5 and I-6

Shop Drawing by Otis Elevator Co., drawing nos.: P-4804



I-5. Ceiling of elevator. (84-04)



I-6. Elevator floor displaying the Otis name. (85-05)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	linoleum tile 6" x 6"	fair	Remove tile and restore original floor material.
BASE	wood		Clean.
WALL	metal grey gloss paint	good	Clean.
CEILING	acoustical tile		Clean.
DOORS	metal		Clean.
FIXTURES	new fluorescent circular tube	fair	
OTHER	metal grille	good	Strip old paint if over 15 mils thick. Repaint with original color.

D. Restrooms
Date: 1933

Photo no.: I-7

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-7. View into typical toilet room. (80-28A)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	ceramic tile	good	Clean. Remove heavy wax build-up.
BASE	ceramic tile	good	Clean.
WALL	ceramic tile painted plaster	good good	Clean. Repaint to original color. Strip old paint to 4 mils or less if more than 15 mils thick.
CEILING	concrete	good	Clean and repaint to original color.
DOORS	solid wood	good	Strip old paint if more than 15 mils thick. Repaint with original color.
FIXTURES	metal ceiling hung incandescent	good	Repair when necessary.
OTHER	marble hanging stalls plumbing fixtures	good good	Clean with a non abrasive cleaner Periodically check for leakage.

E. West, South, and East Galleries

Date: 1933, 1934

Photo nos.: I-8 thru I-14

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-8. Anne Rosenthal restoring frescos. (86-17A)

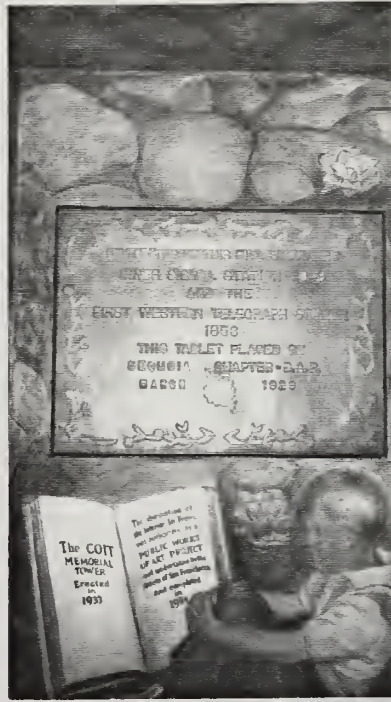


I-9. View of West Gallery during fresco restoration. (86-18A)

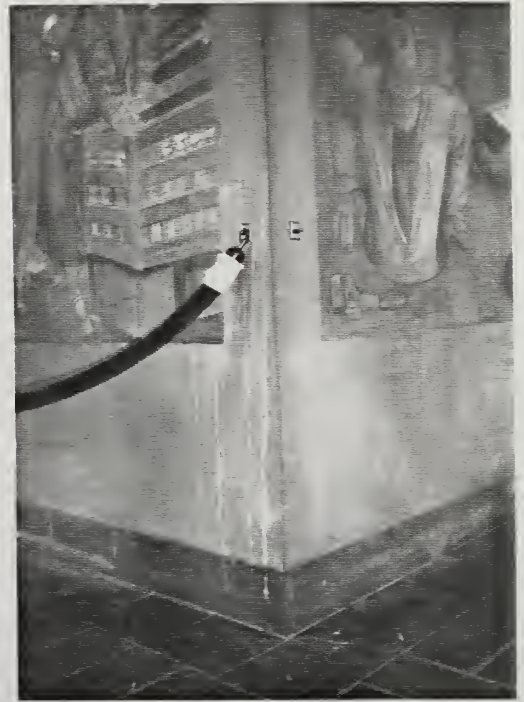
	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	12" x 6" quarry tile	fair	Clean. Remove heavy wax build-up. Repair cracks and holes from barriers.
BASE	6" quarry tile	good	Clean.
WALL	frescos colored plaster	excellent good	Clean frescos by conservators only. Repair holes in walls from barriers with materials used by conservators when repairing frescos. Clean plaster with gentlest method possible.
CEILING	concrete	good	Remove paint to smooth surface. Repaint original wheat color with terra cotta color border at frescoes.
DOORS	solid wood	good	Strip finish if over 15 mils. Repaint when needed original aqua green color and texture. Clean hardware.
FIXTURES	metal ceiling hung incandescent	good	Good example of "Art Deco" Style. Wiring for hanging fixtures should be checked and fixtures cleaned to remove corrosion by a professional in historic light fixtures, such as Nowell's Victorian Lighting (415/332-4933).
DAR PLAQUE	bronze	good	Commemorates the signalling station on Telegraph Hill (1849) and first western telegraph station (1853). Clean by conservator only.
PUBLIC PHONE BOOTH	plaster	fair	Repair and redesign more appropriately compatible to the historic integrity of the building.



I-10. "Art Deco" light fixture.
South Gallery. (80-27A)



I-11. *Dar* Plaque.
(80-26A)



I-12. Typical
condition of
plaster walls
in Galleries.
(78-17A)



I-13. Hole in quarry tile from barriers.
(81-32A)



I-14. Cracks in quarry tile near
glass doors. (77-13A)

F. Gift Shop
Date: 1978, 1980

Photo nos.: I-15, I-16

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-15. View of built-in cabinet. (82-34A)



I-16. Louvered door and counter. (82-35A)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	concrete	good	Clean. Eventually replace with quarry tile.
BASE	no base		
WALL	concrete	fair	Clean. Paint.
CEILING	concrete	good	Clean. Paint.
DOORS	solid wood louvered	good	Strip finish if over 15 mils. Repaint when needed original aqua green color and finish. Clean
hardware.			
FIXTURES	metal ceiling hung incandescent track lighting	good	Repair when necessary. Replace with more compatible when possible.
FURNITURE	formica, wood cabinets	good	Non compatible. Entire space should be redesigned to be more compatible to the historic integrity of the building.

G. Stairway to Second Floor and Keeper's Vestibule

Date: 1933

Photo nos.: I-17 thru I-26

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-17. Fresco murals and wood door.
(57-04A)

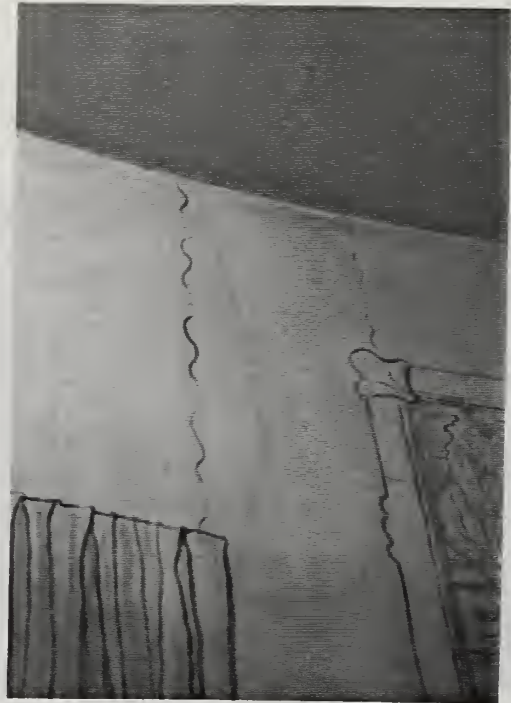


I-18. Fresco murals. (57-06)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	concrete	good	Clean.
WALL	frescos colored plaster	fair fair	Clean and restore by conservators only. Clean plaster with gentlest method possible.
CEILING	plaster/concrete	fair	Repair cracks and water damage. Paint of ceiling and trim appears to be original.
DOORS	solid wood	good	Strip finish if over 15 mils. Repaint with correct paint color. Clean hardware.
RAILINGS	galvanized metal	good	Railings have chips of different colors of paint in places indicating that they were painted several times. Pineapple endings, a symbol often used to represent hospitality. Detailing and sharp edges on endings worn down. According to Arthur Brown Jr.'s specifications, the interior iron stair railings were not intended to be painted. Remove all remnants of paint.
FIXTURES	wall mounted	good	Repair when necessary.



I-19. Bronze elevator hardware. (72-35A)



I-20. Typical crack on wall and ceiling. (59-14)



I-21. Metal door, hose bib on wall, painted plaster wall and base, fresco mural. (30-28A)



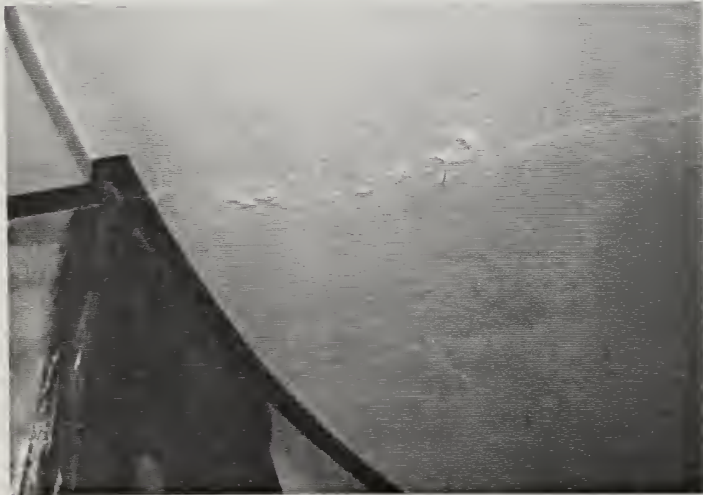
I-22. Concrete steps, painted plaster, metal rail, fresco murals. (72-36A)



I-23. Detail of pineapple end of railing.
(58-09)



I-24. Chipped plaster on wall.
(65-08A)



I-25. Typical damage on ceiling.
Painted trim. (58-10)



I-26. Metal key operated light
switch. (56-04)

H. Keeper's Apartment
Date: 1933

Arthur Brown, Jr. architectural drawing nos.: 2, 8

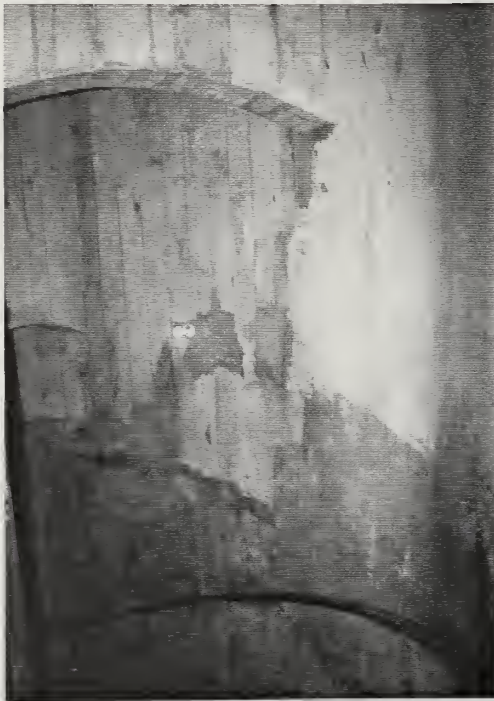
The Keeper's apartment has gone through an unknown amount of alterations. No documentation for these alterations was available for this historic structure report. Therefore, the Historical Architect has determined that the Keeper's apartment will not be included in this report.

I. Third Floor Storage Space and Tower Landings

Date: 1933

Photo nos.: I-27, I-28

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-27. Concrete patches throughout tower stair.
Typical wall hung light fixture. (20-09A)



I-28. Typical painted wood door.
Water tank. (20-11A)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR	concrete	good	
WALL	concrete	fair	Existing patching does not match. Repatch with more compatible composition, color, and texture.
CEILING	concrete	fair	
DOORS	solid wood	good	Repaint when necessary with correct paint color; clean hardware.
RAILINGS	galvanized metal	good	Pineapple endings, a symbol often used to represent hospitality. Detailing and sharp edges on endings worn down. According to Arthur Brown Jr.'s specifications, the interior iron stair railings were not intended to be painted. Remove all remnants of paint.
FIXTURES	wall mounted ceiling hung	good good	Exposed light bulb. Repair when necessary. Light bulb hanging from a chain. Repair when necessary.
WATER TANKS	metal plate	fair rusting	Material indicated on shop drawings as "plate." Tanks should be drained and alternate water supply developed. Danger of leak into structure above murals.

J. Belvedere Level

Date: 1933

Photo nos.: I-29 thru I-34

Arthur Brown, Jr. architectural drawing nos.: 2, 8



I-29. Elevator and stairway door.
(18-01A)



I-30. Exterior door and barriers.
(72-34A)

	MATERIAL/TYPE	CONDITION	COMMENTS/RECOMMENDED TREATMENT
FLOOR AND STAIRS	concrete	good	Clean. Repair treads.
BASE	painted concrete	fair	Repaint with original colors.
WALL	painted concrete	fair	Repaint with original colors.
CEILING	painted concrete	fair	Strip old paint if more than 15 mils thick. Repaint with original color. Clean hardware.
DOORS	solid wood elevator door metal door	good good good	Strip paint if more than 15 mils thick. Repaint with original color. Clean and refinish.
RAILINGS	galvanized metal	good	Railings have chips of different colors of paint in places indicating that they were once painted several times. Pineapple endings, a symbol often used to represent hospitality. Detailing and sharp edges on endings worn down. According to Arthur Brown Jr.'s specifications, the interior iron stair railings were not intended to be painted. Remove all remnants of paint.
FIXTURES	wall mounted ceiling hung	good good	Repair when necessary.



I-31. "Kalamein" exterior door.
Metal mesh mechanical room door.
(19-07A)



I-32. Detail of painted concrete
wall. (68-17A)

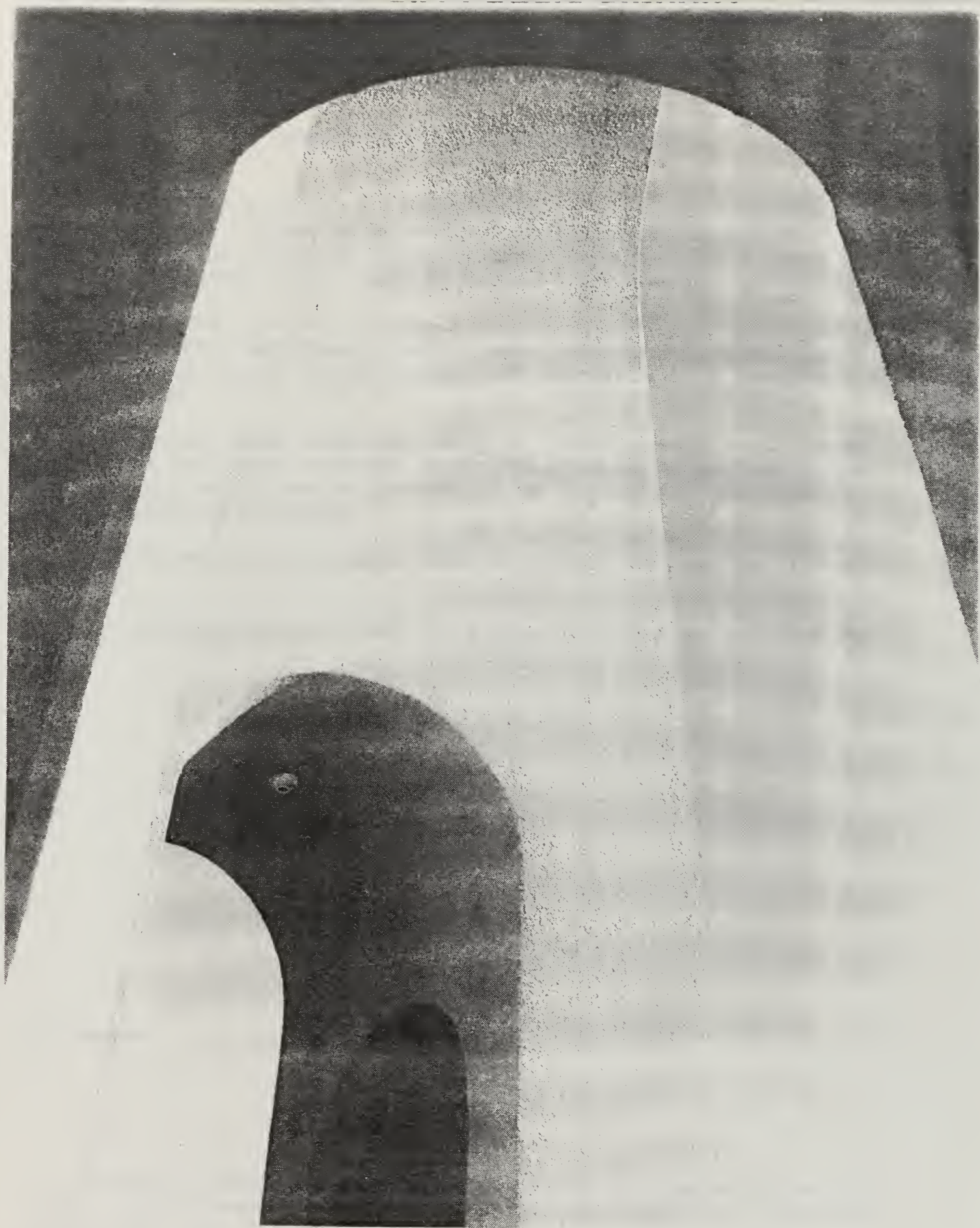


I-33. Round metal window.
Concrete steps. Metal railing.
(19-05A)

a84133.4 Sint



I-34. Ceiling hung light fixture.
Painted walls and ceiling.
(18-02A)



VI. ISSUE OF CYCLICAL MAINTENANCE

VI. ISSUE OF CYCLICAL MAINTENANCE

The maintenance objective in a historic structure is to make the historic fabric last as long as possible. Historic building maintenance has preservation as its goal. It is a highly technical skill and requires attention to detail. Every method and material used must be carefully tested in order to judge the short and long term results.

It is essential to prepare a maintenance manual and maintenance program in concert with the restoration of the structure in order to protect the future of the building from the use of damaging materials by well meaning staff unfamiliar with the preservation of historic materials.

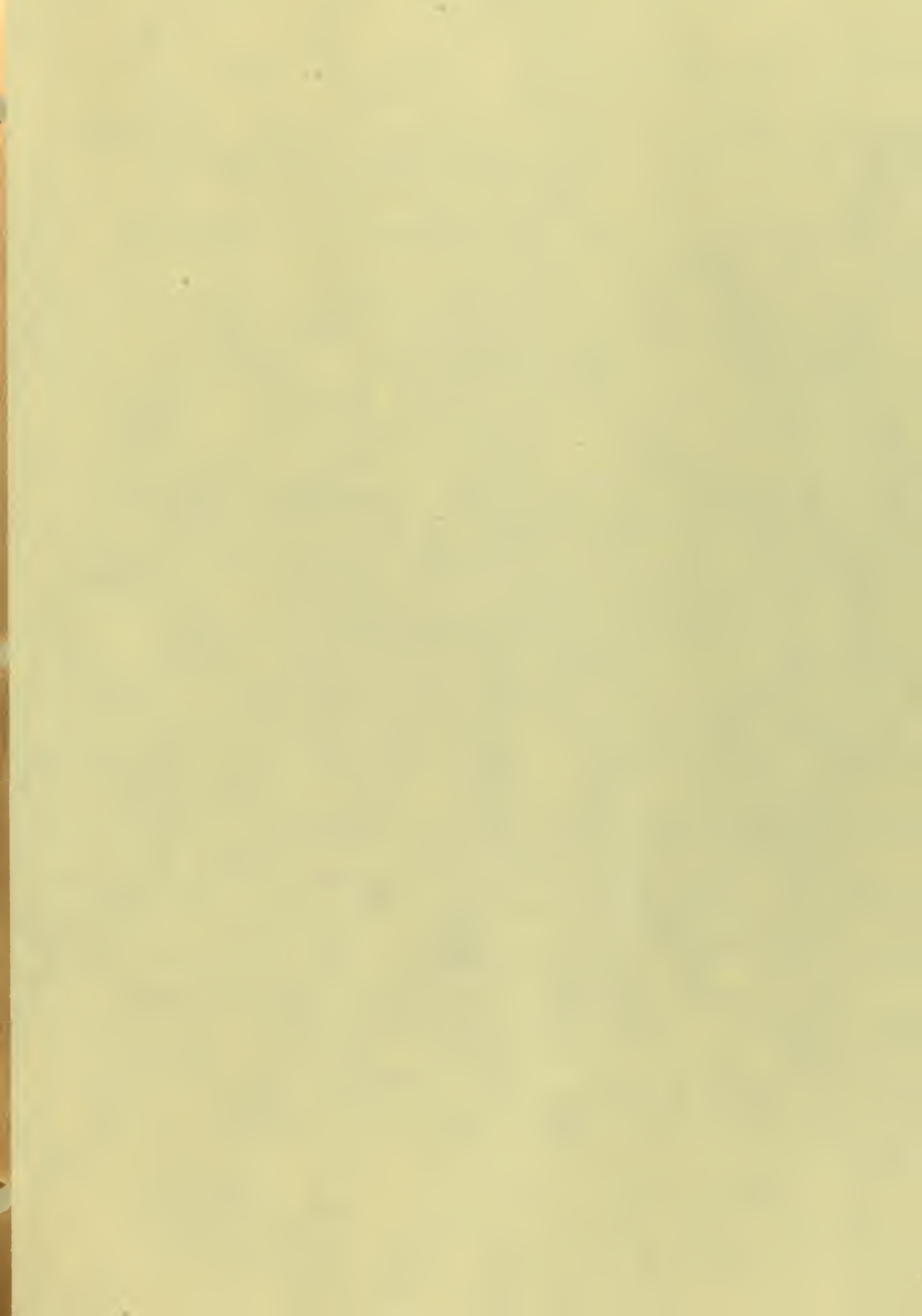
The manual should contain such things as "as-built drawings," color samples, manufacturers' instructions, construction records collected during the construction phases, how often each surface must be inspected, and the long and short term maintenance materials required for each surface.

Cleaning methods for all materials should be developed before a decision is made to resurface.

A valuable publication to consult on the subject is published by the National Park Service.¹

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¹ Chambers, J. Henry Chambers, AIA; U.S. Department of the Interior, National Park Service, "Cyclical Maintenance for Historic Buildings," (Washington D.C.: Government Printing Office, 1976).





VII. FUTURE NEEDS

VII. FUTURE NEEDS

The future of Coit Tower depends on the development of a cyclical maintenance program and the city's commitment to adhere to the program. All future maintenance and restoration projects should preserve the building's historical integrity. This report provides preservation treatments for the historically significant features of Coit Tower in order to assist in developing a cyclical maintenance program and future restoration projects. A priority list for future phases of restoration should be developed in order to restore the primary features as funds become available. All future restoration and alterations must be documented. This report must be updated as further treatments are developed and future needs are discovered.

The State Historic Building Code Committee should be consulted when dealing with future Handicap access revisions.

Presently the San Francisco Bureau of Architecture has a "dash gun" for the application of dash coat for repairing extremely deteriorated dash coat. This should be used with the supervision of an engineer. The dash coat should be monitored for cracks and should extreme movement be detected, measures should be taken to prevent future movement before repairing a crack.

There will be an installation of barriers for the murals on the first floor in the near future. Construction of the barriers should be monitored to prevent damage to the murals and heavy damage to the quarry tile floor.

Several significant historic features should be restored in future restoration projects. The following is a list of some items that should be restored:

- remaining frescos
- gallery plaster around frescos
- quarry tile cracks in Galleries
- "kalamein" metal doors
- elevator lobby grille door
- gallery and elevator lobby ceiling and ceiling trim
- gallery glass doors and windows
- exterior railings
- front entrance steps
- wood door and trim doors

Several significant historic features should be reconstructed. The following is a list of some items that should be reconstructed:

- entrance door
- entrance brick steps with mat
- quarry tile roof surfaces
- precast stone balustrade in front of tower on west side of front porch steps
- water tanks

The following is a list of possible future projects for Coit Tower:

- Design a front admission desk for the vestibule that will not dominate the space but be compatible with the historic integrity of the building. The desk should be portable.
- Provide more security for the building.
- Redesign or relocate the gift shop area in order to preserve the historical integrity of the building and the murals.
- Redesign security screens for the Keeper's apartment to be more compatible to the building's historical integrity.
- Provide indirect lighting for parking.
- Construct plaza in the rear of the building as per schematic drawings of Arthur Brown, Jr.
- Provide proper linings for planters.
- Repave parking lot.



VIII. BIBLIOGRAPHY

VIII. BIBLIOGRAPHY

A. Text Resources

Brown, Arthur Jr. Letter to Captain B. P. Lamb. Secretary Board of Park Commissioners. San Francisco, California, December 19, 1932.

Condit, Carl W. American Building. Chicago and London: The University of Chicago Press, 1975.

Dutton, F. Holland. "History of Pioneer Park on Telegraph Hill." Official Program. Dedication Lillie Hitchcock Coit, Tower, Sunday, October 8th, 1933.

Ferbrache, Lewis. "Interview with Bernard B. Zakheim" Archives of American Art, Smithsonian Institution, San Francisco, 1964.

Hittell, J. History of California, Vol. III.

Holdredge, Helen. Firebelle Lillie. New York: Meredith Press, 1967.

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Howard, Henry T. "The Coit Memorial Tower." *Architect and Engineer*. 115:3

Jewett, Masha Zakheim. Coit Tower, San Francisco: Its History and Art. San Francisco, California: Volcano Press, 1983.

Minutes of the Second Meeting of the Regional Committee, District 15 PWAP, December 18, 1933.

Recreation and Park Commission Meeting Minutes, San Francisco, California, September 2, 1931.

B. Arthur Brown, Jr., Architect, Schematic Design Drawings

The Coit Tower drawings were copied from the Arthur Brown, Jr. Papers, the Bancroft Library, University of California.

TELEGRAPH HILL MONUMENT

Dwg No.	Description	Date	Revisions
N.N.*	Elevation	Sept. 1931	
N.N.	Ground Floor	Sept. 1931	
N.N.	untitled (ground floor and site)	no date	
N.N.	untitled (plaza detail?)	May 12, 1931	
N.N.	Portion of Telegraph Hill Showing Location of State Engineer Monument	Nov. 12, 1931	
N.N.	Portion of Telegraph Hill Showing Location of State Engineer Monument (further developed)	Nov. 12, 1931	
N.N.	Plan of Belvedere	Sept. 21, 1931	
N.N.	Plan of Machine Room	Sept. 21, 1931	
N.N.	Plan Thru Main Shaft	Sept. 21, 1931	
N.N.	Resturant * Kitchen Dohrmann Hotel Supply Co.	11/14/31	
N.N.	untitled (site plan with plaza?)	no date	
N.N.	untitled (site plan with stairs)	no date	
N.N.	Profile of Kearny Street	Oct. 1931	
N.N.	Section North South	(Oct. 1931) (assumed)	
N.N.	Telegraph Hill (sketch of road)	no date	

* No Number

C. City and County of San Francisco, Department of Public Works,
Bureau of Engineering, M. M. O'Shaughnessy, City Engineer

PLANS FOR THE IMPROVEMENT OF TELEGRAPH HILL BOULEVARD.

Dwg No.	Description	Date	Revisions
N.N.	Paving Plan, 1"=30'	Oct. 1923	04/22/26 01/31/27 09/19/27
1 of 4	General Plan, 1"=30'	Oct. 1922	
2 of 4	Profile & Cross Sections	Oct. 1922	
3 of 4	Greenwich St. Retaining Wall	Oct. 1922	
4 of 4	Filbert St. Wall & Stairs	Oct. 1922	
N.N.	Telegraph Hill Boulevard (observation terrace)	Nov. 1922	

D. Arthur Brown, Jr., Architect, Architectural Drawings

MONUMENT FOR TELEGRAPH HILL
SAN FRANCISCO, CALIFORNIA

Dwg No.	Description	Date	Revisions
1	Plot Plan & Alternates	11/21/31	
1	Plot Plan & Alternates	11/21/31	11/12/32
2	1/8" Scale Plans	11/21/31	
2	1/8" Scale Plans	11/21/31	03/08/32

THE HISTORY OF THE UNITED STATES OF AMERICA

BY JAMES M. SMITH

NEW YORK: THE NEW YORK PUBLIC LIBRARY, ASTOR LENOX AND TILDEN FOUNDATIONS

1900

THE NEW YORK PUBLIC LIBRARY, ASTOR LENOX AND TILDEN FOUNDATIONS

1900

THE NEW YORK PUBLIC LIBRARY, ASTOR LENOX AND TILDEN FOUNDATIONS

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THE NEW YORK PUBLIC LIBRARY, ASTOR LENOX AND TILDEN FOUNDATIONS

1900

Dwg No.	Description	Date	Revisions
2	1/8" Scale Plans	11/21/31	03/08/32 11/12/32
3	1/8" Elevations & Sections	11/21/31	
3	1/8 [sic] Scale Elevations (new drawing)	03/08/32	
3A	1/8" Scale Sections (new drawing)	03/08/32	
4	Entrance Details	11/21/31	
4	Entrance Details	11/21/31	03/08/32
5	1st Fl. Exterior D'T's	11/21/31	
5	1st Fl. Exterior D'T's	11/21/31	03/08/32
6	Exterior & Int'r Det's 3rd Floor, Belvedere Fl., Windows, Doors, Grilles, Stair, etc.	11/21/31	
6	Exterior & Int'r Det's 3rd Floor, Belvedere Fl., Windows, Doors, Grilles, Stair, etc.	11/21/31	03/08/32
7	Belvedere Details	11/21/31	
7	Belvedere Details	11/21/31	03/08/32
8	Details of 1st Fl. Lobby	11/21/31	
8	Details of 1st Fl. Lobby	11/21/31	03/08/32
9	Roof Details (new drawing)	03/08/32	

E. O. H. Snyder, Engineer, Arthur Brown, Jr., Architect, Structural Drawings

MONUMENT FOR TELEGRAPH HILL
SAN FRANCISCO, CALIFORNIA
(continued)

Dwg No.	Description	Date	Revisions
S1	Foundation Plan & Sections	11/24/31	
S2	First Floor & Second Floor Plans, Wall & Entrance Details	11/24/31	
S3	Wall Slab & Details, 1st & 2nd Stories	11/24/31	
S4	Tower Plans, Belvedere & Lantern Details	11/24/31	
S5	Wall Elevations and Miscellaneous Tower Details	11/24/31	
S1A	Foundation Plan & Sections	03/08/32	
S2A	1st Floor and 2nd Floor Plans, Wall and Entrance Details	03/08/32	
S3A	Wall and Slab Details, 1st and 2nd Stories	03/08/32	
S4A	Plans Above 3rd Floor, Details Above Belvedere Floor	03/08/32	
S5A	Wall Elevations and Miscellaneous Tower Details	03/08/32	

F. Arthur Brown, Jr., Architect, Mechanical Drawings

MONUMENT FOR TELEGRAPH HILL
SAN FRANCISCO, CALIFORNIA

(continued)

Dwg No.	Description	Date	Revisions
M1	Plumbing, Heating, Electrical Wiring	11/21/31	
M1	Plumbing, Heating, Electrical Wiring	11/21/31	03/08/32
M2	Plumbing, Heating, Electrical Wiring	11/21/31	
M2	Plumbing, Heating, Electrical Wiring	11/21/31	03/08/32
M3	Plumbing, Heating, Electrical Wiring	11/21/31	
M3	Plumbing, Heating, Electrical Wiring	11/21/31	03/08/32

G. Shop Drawings

MONUMENT FOR TELEGRAPH HILL SAN FRANCISCO, CALIFORNIA (continued)

<u>Dwg No.</u>	<u>Description</u>	<u>Company Name</u>	<u>Date</u>	<u>Revisions</u>
1 of 2	Steel Window Details	Soule' Steel Co.	02/09/33	02/15/33
2 of 2	Steel Window & Door Details	Soule' Steel Co.	02/09/33	
2 of 2	Steel Window & Door Details	Soule' Steel Co.	02/09/33	02/15/33
3 of 3	Steel Window Details	Soule' Steel Co.	03/08/33	
10391	House Tanks and Drip Pans	Boiler Tank & Pipe Co.	02/16/33	
2	Rear Railing	Arthur Brown, Jr., Y & H (contractor) (Young & Hortsmeier)	03/14/33	
3	Full Size Detail of Start	Arthur Brown, Jr., Y & H	03/14/33	
4	Full Size Detail Railing Braces	Arthur Brown, Jr., Y & H	03/14/33	
1761-1 F.S.	Details of Hollow Metal Elevator Door Fronts	Forderer Cornice Works	Feb.22,1933	
1761-2 F.S.	Details of Hollow Metal Elevator Door Fronts	Forderer Cornice Works	Feb.22,1933	
1761-3 F.S.	Details of Hollow Metal Elevator Door Fronts	Forderer Cornice Works	Feb.22,1933	

Dwg No.	Description	Company Name	Date	Revisions
1761-4 F.S.	Detail of Strut Fastening at Sill Line F.S. Detail of Angle Strut Connections	Forderer Cornice Works	Feb.24,1933	
1761-5	Details of Cast Iron Elevator Door Sills	Forderer Cornice Works	Feb.24,1933	
P-4804	One - S.W.T. - Car S.W. Pass. Elev. (elevator details)	Otis Elevator Co.	10/16/31	10/27/31 (more rev. blurry)
P-4804 (blurry)	One - S.W.T. - Car S.W. Pass. Elev.	Otis Elevator Co.	10/16/31	10/27/31
P-4804	Hollow Metal Elevator Det.No.1 Enclosures (void)	Otis Elevator Co.	10/29/31	
"A"	Lighting Plan	General Electric Co.	Oct.20,1931	
C-772-SF	Control Equipment	Diamond Electrical Manufacturing Co. Coit Monument- Telegraph Hill	03/12/33	
C-772-SF	Control Equipment	Diamond Electrical Manufacturing Co. Coit Monument- Telēgraph Hill	03/12/33	04/21/33
1	Railings, Tower Bldg, Telegraph Hill	National Ornamental Iron and (????) Co. (blurry)	03/08/33	

a84133.4/8biblio



IX. CONSULTANTS' RESUMES

Interactive Resources Inc.

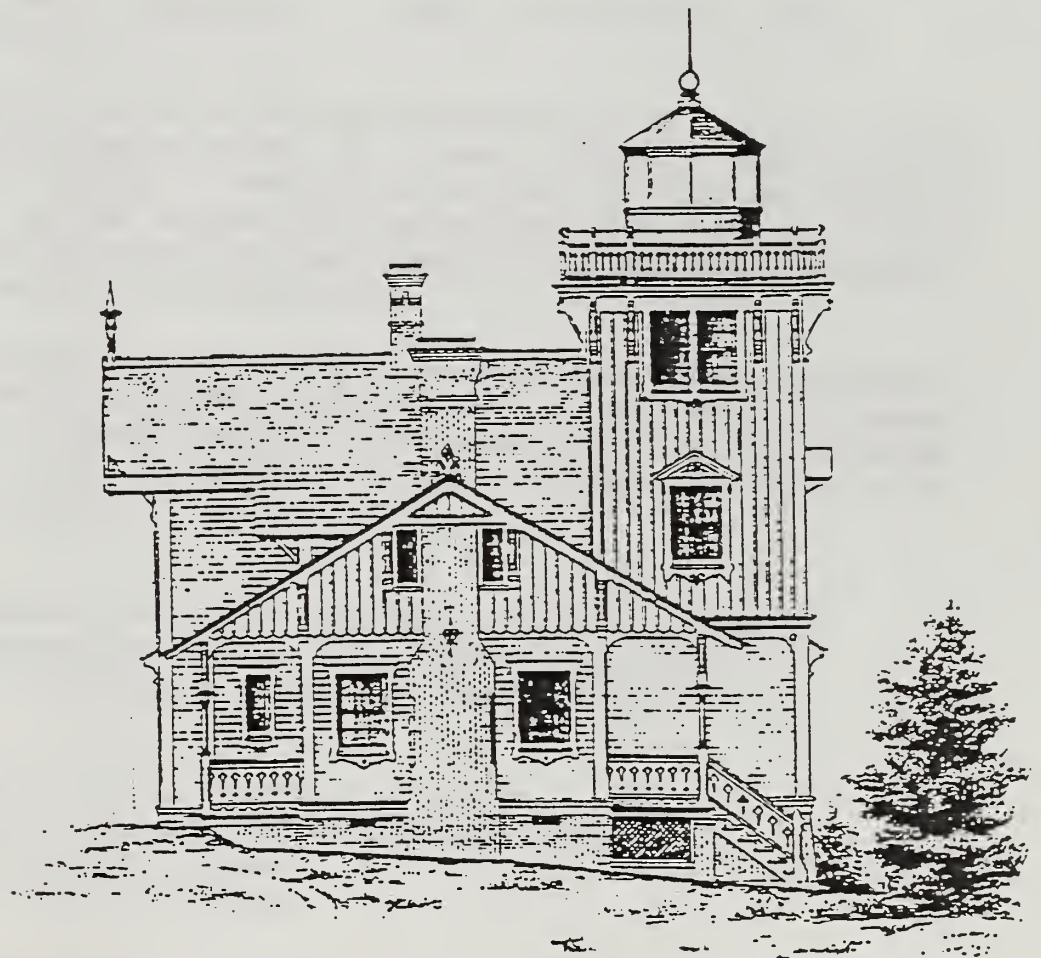
Statement of Qualifications Historic Preservation & Rehabilitation

Interactive Resources Inc.

THE FIRM

Interactive Resources, Inc., is a multidisciplinary architecture-engineering firm founded in 1973 in Point Richmond, California, by Thomas K. Butt, AIA, and John E. Clinton, S.E. Early in 1985 the firm of Dan Peterson and Associates, historic preservation architects, merged with Interactive Resources, Inc., thus creating one of the leading forces in the preservation field. Dan Peterson is the Senior Project Manager for the Historic Preservation Division and contributes more than thirty years of architectural experience to successful restoration projects.

The name "Interactive Resources, Inc.," was originally conceived to describe our goal of bringing together several design disciplines under one roof to better integrate the architecture and engineering professions. We have achieved this objective with in-house architects, structural engineers, construction investigation specialists, interior designers, planners & restoration specialists. As a result, we have gained a reputation for versatility and efficiency. Reducing the need to retain outside consultants has saved both time and money for our clients. Our personal experience with restoration development projects and our capability for life-cycle costing has resulted in projects which are architecturally significant and economically successful.



Interactive Resources, Inc

THOMAS K. BUTT, AIA
President
Principal-in-Charge, Architecture Division

Founder of Interactive Resources, Inc., and its President since 1973, Thomas K. Butt, AIA, heads the firm's Architecture Division. He has more than 20 years of design experience with diversified institutional, residential, commercial and public buildings. Mr. Butt serves as Principal-in-Charge of many of the firm's major projects involving new design, planning or diagnostic investigations. His recent experience includes direct supervision of the following recent projects:

- ° Pacific Gas and Electric Company Richmond Service Center, Richmond, CA
- ° Beringer Winery Master Plan and Public Tour Facility Improvements, St. Helena, CA
- ° Marina Bay Special Area Plan and Public Access Element, Richmond, CA
- ° Ocean Beach Condominiums - Repair of Construction Defects, San Francisco, CA.
- ° Capitol Terrace Condominiums - Repair of Construction Defects, Sacramento, CA.

Mr. Butt is a recognized leader in the field of diagnostic architecture, and has provided investigative and remedial design services for a variety of project types, including commercial and office buildings. Noted for his expertise in reviewing residential condominium failures, he has directed investigations into construction and design deficiencies in more than 2,000 wood frame, multi-family housing units and prepared repair designs and specifications for over 800 of these units.

Mr. Butt has lectured on the subject of construction defects and building maintenance requirements to organizations representing attorneys, homeowners associations and owners of apartment buildings. A trained arbitrator, Mr. Butt has mediated numerous construction disputes among owners, architects, engineers, and contractors under the auspices of the American Arbitration Association.

Education

Master of Architecture, Urban Design, University of California, Los Angeles
Bachelor of Architecture and Bachelor of Arts, University of Arkansas
Engineer Officer Basic Course, U. S. Army, Ft. Belvoir, Virginia

Professional Licenses

Registered Architect, California, Arkansas, and Nevada
National Council of Architectural Registration Boards, Certificaton
Licensed General Contractor, California
Licensed Real Estate Broker, California

Interactive Resources, Inc.

THOMAS K. BUTT

Page Two

Professional Organizations

American Institute of Architects
Construction Specifications Institute
National Trust for Historic Preservation
West Contra Costa Board of Realtors
Society of American Military Engineers

Professional Awards

1982 Honor Award, National Trust for Historic Preservation
1982 U.S. Coast Guard Meritorious Public Service Award
1979 President's Certificate for Outstanding Community Achievement of Vietnam Era Veterans; served with U.S. Army Corps of Engineers in Vietnam, awarded Bronze Star and Army Commendation Medal
Who's Who in California; Who's Who in the West

Public Service

Chairman, West Contra Costa Bayshore Council
Board of Directors, Richmond Chamber of Commerce
Board of Directors, Richmond Rotary Club
Board of Arbitrators, American Arbitration Association
President, East Brother Light Station, Inc.
Former Member of Richmond CETA Advisory Committee, Richmond Community Development Commission, former PTA President
Chairman, Richmond Economic Development Commission

Recent Publications

- ° *Condominium Maintenance Manual*, Community Associations Institute Newsletter, Vol. 8, No. 2-June/July 1988.
- ° *Arbitrator Discusses Complex Problems of Condo Ownership*, Contra Costa Times. November 4, 1984.
- ° *Construction Defects in Residential Condominiums*, Courier. (Newsletter of the Council of Condominium Homeowner Associations, Inc.) Vol. 2, Nov/Dec 1984.

Professional Experience

1973-present	Interactive Resources, Inc., Founding Principal
1971-1973	Mayhew and Thiederman, Architects, Inc., San Francisco
1970-1971	Edward Durell Stone, Inc., Palo Alto
1969-1970	U.S. Army Corps of Engineers
1963-1966	Department of the Interior, National Park Service

Interactive Resources Inc

JOHN E. CLINTON, S.E.
Chairman of the Board
Principal in Charge, Structural Engineering Division

John Clinton, S.E., R.A., is one of the founding principals of Interactive Resources, Inc. He has over 20 years of structural engineering and architectural experience, including three years as assistant to the Chief Consulting Architect for the Bay Area Rapid Transit System. He heads the Structural Engineering Division of Interactive Resources, Inc., and directs structural design services for all of the firm's architectural projects as well as those for a number of outside design firms.

Mr. Clinton's recent experience includes structural upgrading of masonry, concrete, and wood-frame buildings to meet current seismic code requirements, analyzing and surveying construction deficiencies on all types of buildings, and arbitrating and negotiating settlements of construction claims.

Mr. Clinton is Principal-in-Charge of all Construction Services Projects which now comprise a significant portion of the Division's workload. These projects include pre-loan review and inspection, construction observation and investigation of construction defects. He has served public agencies, attorneys and major lenders on projects such as: Ocean Beach, Riverfront Plaza, and Hofbrau, Squaw Valley condominium defects; Candlestick Park, deterioration of structural components; and Coit Tower, deterioration of concrete components.

Education

Master of Science in Structural Engineering, University of Illinois
Bachelor of Architecture, University of Illinois
Engineering Certificate, U.S. Army Engineering School

Professional Licenses

Registered Structural Engineer, California
Registered Civil Engineer, California
Registered Architect, California
Registered Professional Engineer, California, Arizona, Florida, Illinois, Nevada, Oregon, Texas, Washington, Wisconsin

Professional Activities

Structural Engineers Association of California
American Society of Civil Engineers
Earthquake Engineering Research Institute
American Institute of Timber Construction

Interactive Resources, Inc.

JOHN E. CLINTON

Page Two

Honors and Awards

Bronze Star for engineering achievements in Vietnam

Public Service

Board of Arbitrators, American Arbitration Association

Board of Directors, Almonte Sanitary District

Member-Board of Appeals for Abatement of Dangerous Buildings and The Uniform
Housing Code , City of San Pablo

Former Member, California Jaycees

Board of Directors, Larkspur Landing Rotary Club

Professional Experience

1973-present	Interactive Resources, Inc., Founding Principal
1972-1973	Maule - Clinton Assoc., Architects, San Francisco, CA
1969-1972	Parsons, Brinckerhoff, Tudor, Bechtel, Engineering Consultants to BART, San Francisco, CA
1967-1969	Corps of Engineers, U.S. Army
1966-1967	American Bridge Division, U.S. Steel, Chicago, IL

Interactive Resources Inc

GERALDINE PETERSON
Designer - Historic Preservation Specialist
Architecture Division

Geraldine Peterson has extensive experience in art and interior design and a considerable background in historic preservation planning and in colors, finishes and construction materials used in historic buildings. She has been instrumental in developing architectural contract documents for historic preservation projects. As a Partner, she monitored construction of all preservation projects completed by Dan Peterson, AIA and Associates before its merger with Interactive Resources, Inc. in 1985.

Ms. Peterson has a working knowledge of the latest historic preservation and restoration guidelines, regulations and procedures for assessment and certification and historic preservation planning. Ms. Peterson has worked on numerous historic rehabilitation projects including the award winning Old Post Office (Sonoma County Museum), Santa Rosa; Bank of America, Mendocino; Eureka Central Hotel, Eureka; specializing in finish materials and historic colors, and done numerous planning studies including the Benicia Historic Triangle Development plan and Santa Rosa's Railroad Square Development Plan.

A professional preservation planner, she has been project manager, coordinator, researcher and field surveyor for six city- or countywide Historic Resource Surveys funded by the State of California Office of Historic Preservation. She has edited and published two major publications, Santa Rosa's Architectural Heritage and Petaluma's Architectural Heritage, as a result of these surveys along with five other volumes on various historic preservation subjects. As a principal for 10 years in an architectural firm specializing in historic preservation, she has prepared numerous Historic Preservation Certification Applications (both Part 1 and Part 2), many National Register applications (individual properties and district), and, prepared several Historic Structures Reports and Environmental Assessments.

One of her most challenging projects was the historic rehabilitation of the main house at Iron Horse Ranch and Vineyards in Sonoma County. The house is used for entertaining senators, governors, and heads of state by Mr. and Mrs. Barry Sterling. All the interior finishes, wallpaper, ceramic tile design, cabinet and casework design, and exterior color schemes were done by Ms. Peterson in this old farmhouse. The farmhouse was converted to a 7,000-square foot Queen Anne Victorian residence and guest house to maximize the historic nature of the house while using the most expedient, cost effective methods possible.

Along with her expertise in the field of historic preservation/restoration, Ms. Peterson is well versed in specification writing, construction review, plan checking and construction inspection of all types of construction.

Interactive Resources Inc

GERALDINE PETERSON

Page Two

Education

B.A., 1972, Fine Art-Art History, Sonoma State University
A.A., 1970, Fine Art, Santa Rosa Junior College
1 year post graduate courses in Environmental Planning, Sonoma State University
1 year undergraduate courses in Design, University of California, Berkeley
Paint Analysis Seminar, 1985, Association of Preservation Technology
Construction Specifications Seminar, 1983, Redwood Chapter CSI

Professional Experience

1985-present	Interactive Resources, Inc., Pt. Richmond, CA Historic Preservation Specialist Interior and Color Design Graphic Design
1975-1985	Dan Peterson, AIA & Associates, Inc., Santa Rosa, CA, Partner Historic Preservation Specialist Interior and Color Design Graphic Design and Publishing
1966-1968	City of Santa Rosa Planning Department, Santa Rosa, CA Planning Technician Graphic Arts and Printing

Registration

California Teaching Credential, Fine Arts and Arts and Crafts

Activities

Professional Artist: weaving and pottery

Memberships

American Institute of Architects, Associate Member
Association of Preservation Technology, Canada
National Trust for Historic Preservation
California Preservation Foundation
Construction Specifications Institute

GERALDINE PETERSON

Page Three

Representative Interior and Color Design Experience

Bank of America, Mendocino Branch
Oroville Historic District Facades Restoration
East Brother Light Station Bed & Breakfast
Iron Horse Ranch and Vineyards, Forestville
Garrett Residence, Santa Rosa
De Meo Residence, McDonald Avenue, Santa Rosa
McDonald Place, Santa Rosa
Harter Residence
Smith Residence
Pelleschi Residence
Dwyer Residence, Santa Rosa
Historic Railroad Square
Teevax (Lee Bros. Buildings)
Old Town Furniture
J. M. Rosen (Silver Dollar)
Oliver Hotel
Welfare League Building
Whistle Stop Antiques
Tirone Building
Schramsberg Winery and Office Building, Calistoga
Winship Building, Napa
Eureka Central Hotel
Wasserman House, Santa Rosa
Llano Road Roadhouse, Sebastopol
Myst Bookstore, Sebastopol
Watson School, Bodega
Fort Bragg City Hall Facade Restoration

GERALDINE PETERSON

Page Four

Representative Preservation Experience

Historic Rehabilitation Projects:

Old Post Office and Federal Building, Santa Rosa
Bank of America, Mendocino
Watson School, Bodega
Yreka Hotel, Yreka
Armistice Chapel, Yountville Veterans Home
Llano Road Roadhouse, Sebastopol
Fountaingrove Round Barn, Santa Rosa
Sonoma Community Center, Sonoma
Eureka Central Hotel, Eureka
Lee Bros. Buildings, Railroad Square, Santa Rosa
Wasserman House, Santa Rosa
Iron Horse Ranch Estate, Forestville
Schramsberg Winery, Calistoga
Cnopius House, Santa Rosa
Welfare League Building, Railroad Square, Santa Rosa
Fort Bragg City Hall Facade Restoration
Mohr House, Pleasanton

Historic Planning Projects:

Antique Block, El Pueblo de Los Angeles State Park
South Lake Tahoe Estates, National Forest Service
Railroad Square Development Plan, Santa Rosa
Benicia Historic Triangle Development Plan
Benicia Arsenal Commandant's House
City of Sebastopol Downtown Portfolio
Western Sonoma County and Coastal Zone Historic Survey
City of Colusa Historic Resource Survey
City of Pinole Historic Resource Survey
City of Petaluma Historic Resource Survey
City of Santa Rosa Historic Resource Survey
City and County of Napa Historic Resource Survey
Danville Historic Public Buildings

Publications:

Santa Rosa's Architectural Heritage
Petaluma's Architectural Heritage
Santa Rosa's Old Post Office Historic Documentation
Antique Block, El Pueblo de Los Angeles State Park
Point Reyes Station Historical Architectural Resource Survey
Historical and Architectural Survey of the Town of Tomales
Old Post Office: Past and Future

GERALDINE PETERSON

Page Five

Historic Structure Reports

Coit Tower

Mackay School of Mines - University of Nevada, Reno

Fort Bragg City Hall

Santa Rosa Old Post Office and Federal Building

Bank of America, City of Mendocino Branch

Antique Block, El Pueblo de Los Angeles State Park

Watson School, Bodega

Fountaingrove Ranch, Santa Rosa

Sonoma Community Center, City of Sonoma

Armistice Chapel, Yountville Veterans Home

National Register of Historic Places Applications

Ford Motor Assembly Plant, Richmond

Railroad Square Historic District, Santa Rosa

Hotel La Rose, Santa Rosa

Hinds Hotel, Freestone

Wasserman House, Santa Rosa

Certification of Historic Properties (NPS 10-168)

Lee Bros. Buildings, Santa Rosa

Vickrey/Brunswig Building, Brunswig Annex, Los Angeles

Plaza Hotel, El Pueblo de Los Angeles State Park

Fort Bragg City Hall

Old Oroville Historic District Facades Restoration

Determination of Eligibility (per CFR 36, part 800)

Richmond Natatorium

Eureka Central Hotel, HUD Project

Marlow Road Project, City of Santa Rosa

Old Mill, Mill Valley

Southern Pacific Passenger Depot, Benicia

Fort Bragg Library

Von Pfister Adobe, Benicia

Llano Road Roadhouse, Sebastopol

Interactive Resources, Inc

ANN-MARIE MEENAHAN **Architectural Designer** **Architecture Division**

Ann-Marie Meenahan joined the professional staff at Interactive Resources, Inc., in the Fall 1988. Ms. Meenahan has four years of professional experience in museum/gallery design and restoration projects. She has written programs, feasibility studies, and historic facade studies. Additional experience includes site inspection, and development and coordination of construction documents through all phases of design.

At Interactive Resources, Inc., Ms. Meenahan applies her design experience to the Department of Historic Preservation. She is currently assisting with the renovation of the Point Sur Light Station, one of the oldest existing Light House in the United States. Additional experience includes:

Historic Structure Reports:

Coit Tower, San Francisco, CA
The Mackay School of Mines, The University of Nevada, Reno, NV
Point Sur Light Station, Big Sur, CA

Feasibility Studies:

Madison Art Center, Madison, WI
Rockford Art Museum, Rockford, IL
The Society of Pewabic Pottery, Detroit, MI
Detroit Institute of Arts, Detroit, MI

Design Projects:

Minnetrista Cultural Center, Muncie, IN
American Indian Gallery, Taylor, MI
St. Paul's United Methodist Church, Monroe, MI
Levy Residence, Bloomfield Hills, MI

Education

Masters of Architecture, University of Michigan, College of Architecture and Urban Planning
Bachelor of Science in Architecture, Lawrence Technological University, School of Architecture

Interactive Resources, Inc.

Ann-Marie Meenahan

Page Two

Continuing Education

Eastfield Village \ Private Open-Air Museum, East Nassau, NY, August 1987
Summer Workshop, "Dating Historic Structures"
National Trust Conference, Baltimore, MD, October 1984

Professional Activities

American Institute of Architects, East Bay Chapter, Associate Member
National Trust for Historic Preservation
Pleasant Hill Historical Society

Professional Experience

1988-present	Interactive Resources, Inc.
1985-1988	John Hilberry & Associates, Inc., Architects, Detroit, MI
1984-1985	Eastland Realty Syndicate of New York, Developers, Detroit, MI
1980-1983	Morgan Electric, Inc., Electrical Engineers, Southfield, MI
1979-1980	Norman L. Dietrich & Assoc., Landscape Architects, Plymouth, MI



X. EXHIBITS FOR THE MURALS OF COIT TOWER

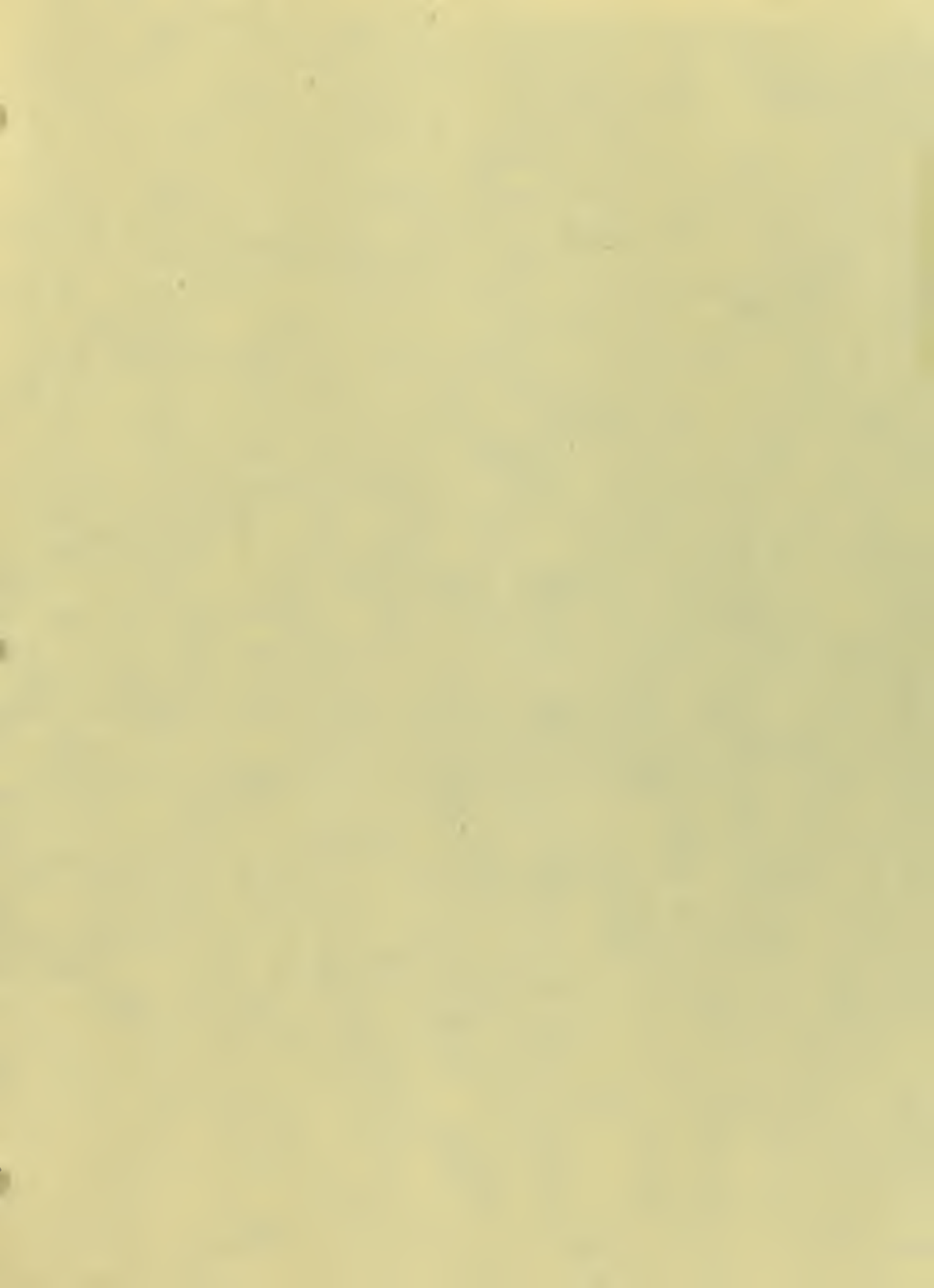


EXHIBIT A.

CLEANING AND RESTORING THE MURALS IN COIT TOWER, 1975

EMMY LOU PACKARD

MAY 15, 1975

May 15, 1975

CLEANING AND RESTORING THE MURALS IN COIT TOWER, 1975

Emmy Lou Packard

At the request of Norman McInnis, Assistant Superintendant, Bureau of Building Repair, a work order was issued on Feb. 18, 1975, by the Department of Public Works. (DPW order 100,688; Account Y-48631; Controller's No. 00437 - see attached copies) This was for the cleaning and repair of the murals (some fresco, some oil on canvas) in Coit Tower.

To protect the City of San Francisco from suit in case of accident, my insurance agent obtained a policy covering me for \$300,000 general and auto liability, coverage effective from 1/1/75 to 1/1/76. (Travellers # 650-624A682-9-IND; agent Jim Myers, 622 North Main, Fort Bragg CA 95437)

Cleaning and restoration or retouch is a procedure that is always subject to criticism and opinion by experts and non-experts. To protect the City against irresponsible opinions, I have done considerable research into the various methods used by trained professionals in Mexico and the United States to clean and restore fresco and oil murals. (The murals in the elevator lobby are oil on canvas. The other murals are true fresco except for Jane Berlandina's, which is tempera in which she uses opaque white. True fresco does not use white pigment, as the white plaster is supposed to serve as white through the very transparent washes of thin color.)

Beside getting what information I could from the artists still available who worked on Coit Tower, I consulted the following organizations and individuals:

INSTITUTO DE RESTAURO DE PINTURA MURAL (one of the official Mexican government restoration departments) Director: Dr. Suriant

DEPARTAMENTO DE RESTAURACIONES DE PINTURA MURAL
Convent of Churubusco, Mexico City; Director: Jaime Cama

RALPH MAYER, consultant and author of Artists Handbook, the best-known authority on techniques of painting.

MAX DOERNER - author of Materials of the Artist; this book is more thorough than Mayer in warning of the dangers inherent in cleaning and retouching works of art.

Juan O'Gorman - well-known Mexican architect and mural painter

Pablo O'Higgins - assistant to Rivera on the Palacio Nacional and other frescos, a mural painter himself.

(see attached comments)

ARCHIVE OF AMERICAN
SMITHSONIAN INSTITUTION

EXPERT OPINIONS

INSTITUTO DE RESTAURO DE PINTURA MURAL - Director: Dr. Surient

At this Institute, one of the two government departments of Resoration in Mexico City, I talked with Eliseo Mijangos de Jesus one of the expert technicians in restaration. This was entirely limited to cleaning and retouching true fresco (on wet plaster, as opposed to dry fresco, where a mural may be painted in tempera on dry plaster). Mr. Mijangos made the following points:

1. The first point, which he emphasized, is: when cleaning and restoring works of art, the less you do the better! (Max Doerner, the European authority on restoration agrees. More murals have been ruined by too much cleaning than from simple neglect.) Starting with that presmise, Mijangos suggested the following steps:
2. Examine the entire surface with a magnifying glass to detect cracks, porosity of plaster, dust, smoke or grease. Bubbles in the interior plaster are sometimes located by tapping the surface lightly and listening to the sound. These bubbles they fill, or "consolidate" by means of injecting various fillers. (This is tricky and can cause trouble if the expansion is different than that of the plaster.)
3. Brush or lightly vacuum the surface to remove dust.
4. First, if you must use a liquid cleaner (If the dirt is a very light coat, and if its chemical composition is not dangerous to the plaster, leave it alone after brushing. A wet cleaning of any kind - even distilled water - may cause efflorescence later.)(See comment by Juan O'Gorman) If you must use a liquid cleaner, try distilled water first. Then if that isn't strong enough, try a 2% solution of ammonia in water. If that isn't enough, try a 5% solution.
5. To repair holes or large cracks, mix lime putty (aged lime) with marble dust. Mix thoroughly before adding a little water to make it workable. Dampen the plaster to be patched and apply the wet plaster. Let it dry overnight at least, before retouching. A week would be better.
6. Retouch with thin acrylic (Liquitex is OK). It is a matter of opinion, for a committee to decide, whether the areas to be painted in should be only lightly indicated so the repair is plainly visible, or whether it should be as accurate an imitaion of the original as possible. Liquitex can be easily removed in the future, with water, if historians want to see how the fresco looked before repair.
7. There is no protective coat, like varnish, that can be put on a fresco. Water will penetrate the coating from behind. Fresco "breathes".

May 15, 1975

METHOD USED TO CLEAN OIL MURALS IN COIT TOWER

Emmy Lou Packard

After reading the available material on cleaning and varnishing oil murals, I wrote to Ralph Mayer, author of The Artists Handbook and consultant on materials and techniques.

To clean an unvarnished mural, Mr. Mayer recommended that I first try cotton dampened with distilled water, then Varnolene (a mineral spirit).

Because of the danger of capillary action of water loosening the glue size, I decided to use the mineral spirit very lightly after first cleaning the paintings with a vacuum brush and French bread.

I also read extensively about varnishes to protect the surface of the oils. Although Damar varnish is excellent, the newer acrylic (methacrylate) resin is available in spray cans, is flat (non-glossy) and can be removed easily with mineral spirits when desired. It is colorless and has been accepted and used by museum and technical experts for twenty years.

Moisture in the room or in the wall may cause a "bloom" on any surface, even glass. But if this occurs, and cannot be wiped off, the varnish can easily be removed.* In the meantime it will protect the painting from deposits of soot and other dirt.

Summary of method:

1. clean with vacuum and brush
2. clean with French bread
3. clean with cotton wads slightly dampened with Varnolene
4. allow to dry for a week
5. two coats of acrylic varnish sprayed on

This method was for the cleaning of the oil murals only.
The frescos will be described on another page.

*with mineral spirit

Emmy Lou Packard



Emmy Lou Packard

3350 18th Street, San Francisco 94110

TO

COIT TOWER REPAIR
MY REPORT IN
AUGUST, 1975.

City and County of San Francisco

Department of Public Works
Bureau of Architecture



December 20, 1985

Job Number: 4762A

Job Title: Restoration of the Mothers
Building at S.F. Zoological
Gardens

Subject: MURAL PRESERVATION

Ms. Emmy Lou Packard
3350 18th Street
San Francisco, CA 94110

Dear Ms. Packard:

Thank you for lending us your report on Coit Tower and providing information on the murals at the Mother's Building. The Arts Commission will be administering the contracts to restore each of these projects in the coming year. We look forward to working with you and hope your book on Diego Rivera goes well.

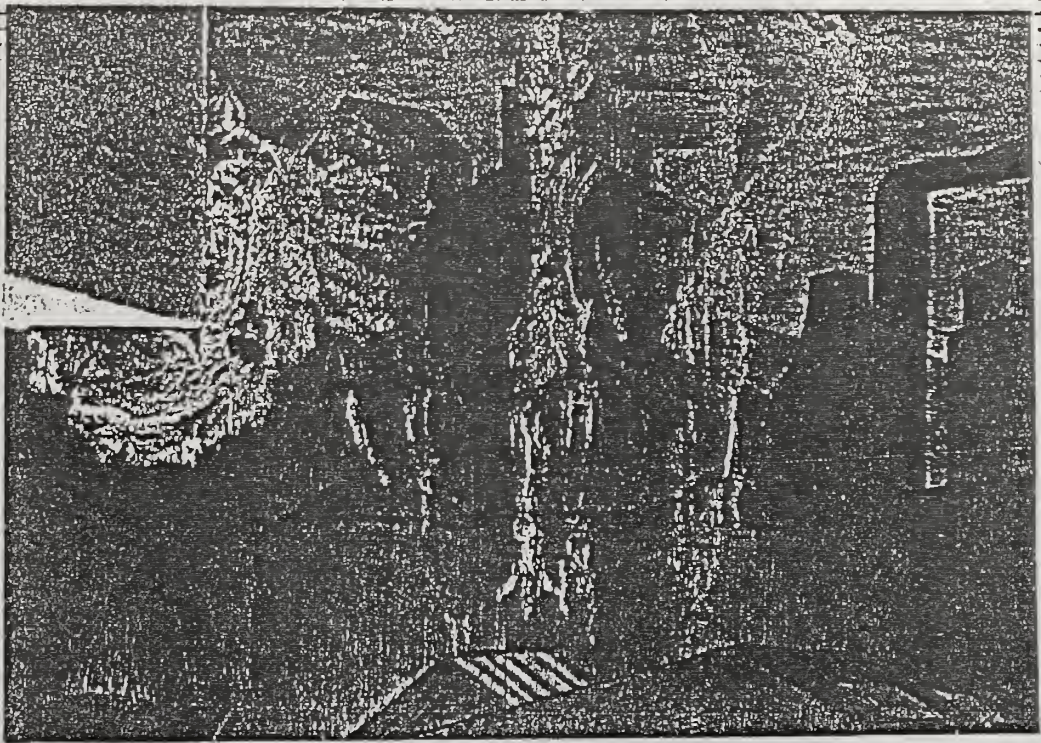
Very truly yours,

A handwritten signature in dark ink, appearing to read "Norman M. Karasick".

Norman M. Karasick
City Architect

BF: pg

cc: Mary Burns
Claire Isaacs
265, 300 (3)



EMMY LOU PACKARD

3350 EIGHTEENTH STREET SAN FRANCISCO 94110 415/863-2827

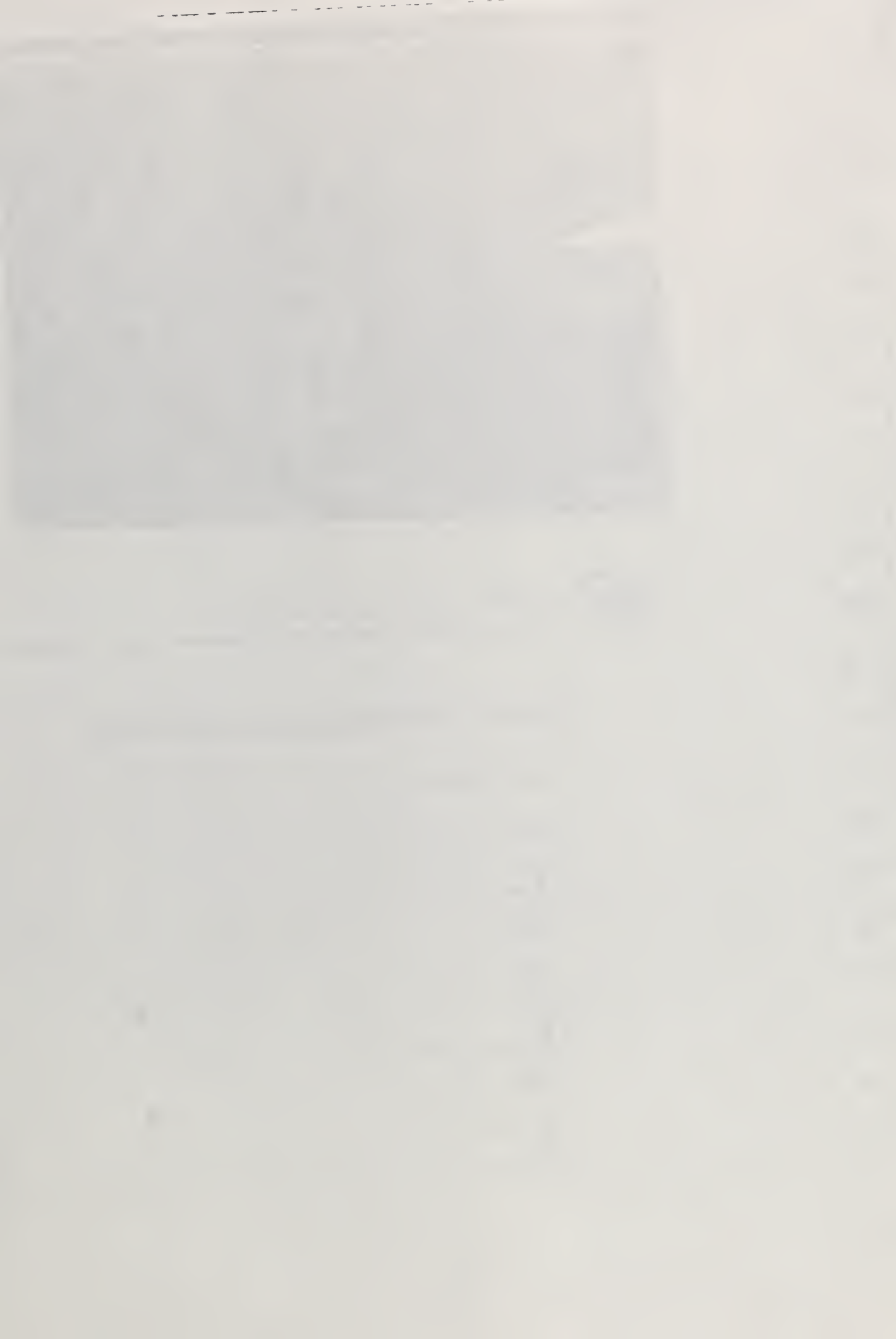
REPORT ON THE RESTORATIONS IN COIT TOWER

August, 1975

INDEX

1. ■ ENTRANCE LOBBY
2. ■ ELEVATOR LOBBY
3. ■ FRESCO REPAIR
4. ■ WINDOW PROBLEM
5. ■ SUMMARY OF SUGGESTED CHANGES
6. ■ RESTORATION CONSULTANTS
7. ■ LETTERS
8. ■ HISTORY

THIS REPORT IS SUBMITTED TO THE BOARD OF SUPERINTENDANTS OF THE COIT TOWER RESTORATION PROJECT, RECEIVED FROM NORMAN MCININTY, ASSISTANT SUPERINTENDANT OF BUILDING REPAIR.



ENTRANCE LOBBY



Hundreds of people go through this dark hall every day on their way to the elevator lobby. Two more ceiling lights would show the frescos to better advantage. Protective poles with leather-covered chain between would help to prevent scratches on the walls. (frescos by John Langley Howard, Ray Boynton)

(photograph: Marshall Douglas 1975)

COIT TOWER

(simple changes to improve circulation and beauty)

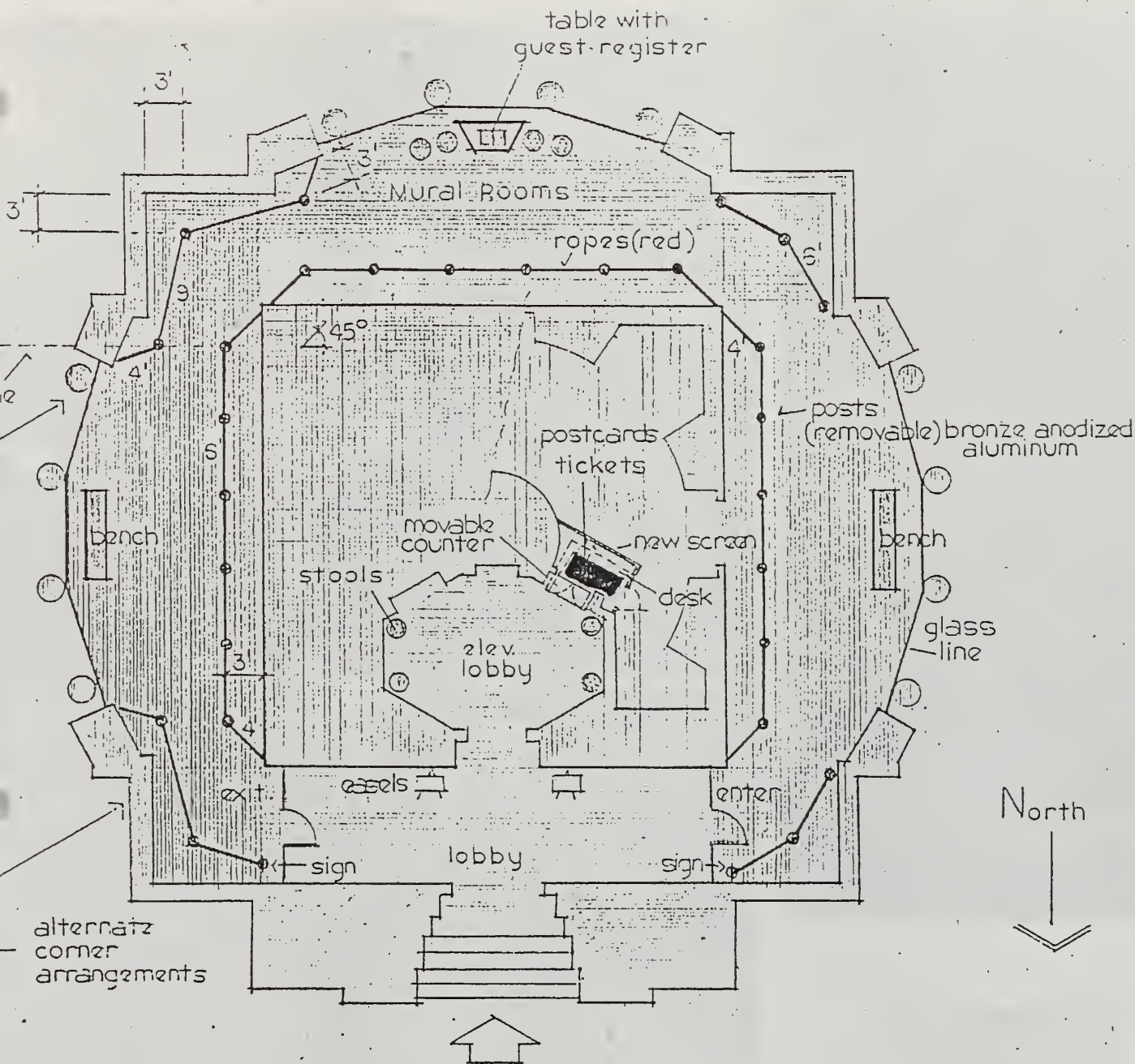
I. ELEVATOR LOBBY

- A. All present furniture should be removed from the elevator lobby. It half-covers three of the lovely oil landscape murals by famous San Francisco artists. City architect Barry Groth has a simple, functional solution to the ticket-buying problem which will eliminate it from the lobby. The present display case will be replaced by framed documents hanging on the walls next to the elevator.
- B. Lighting must be improved to see the paintings properly. This elevator lobby is dark and dreary when it doesn't have to be. Electrician is presently studying lighting problem.

II. FRESCO GALLERIES

- A. Public must be discouraged from touching or scratching the frescos. Discussion with many people brought out the following points: 1) Nowhere in the world are frescos protected by glass or plastic, even the rare frescos in Italy. 2) Any barricade is primarily psychological. The consensus was that a simple series of steel poles in the floor, with a leather-covered chain in between them (like museums have) is sufficient to guide the people away from the temptation to write initials on the walls. Frequent polite signs asking them to put their names in the guest book (ALL historical sites have these books) would allow them to leave their names without vandalizing the walls.
- B. Slit windows must be permanently closed.
 - 1) They serve no purpose, are not used for air.
 - 2) Rain drives under them in winter, washing the fresco painting off below the windows every year.
 - 3) The children shoot at them with BB guns at night, so they must be constantly replaced, in which process the glaziers knock holes in the frescos while trying to replace glass in this confined space.
 - 4) These windows actually prevent one's seeing the fresco paintings. The brilliant light shining thru the narrow windows blinds the eyes.

COIT TOWER



Mural Protection Scheme-PRELIMINARY LAYOUT
COIT TOWER-CITY OF SAN FRANCISCO-JULY 1975

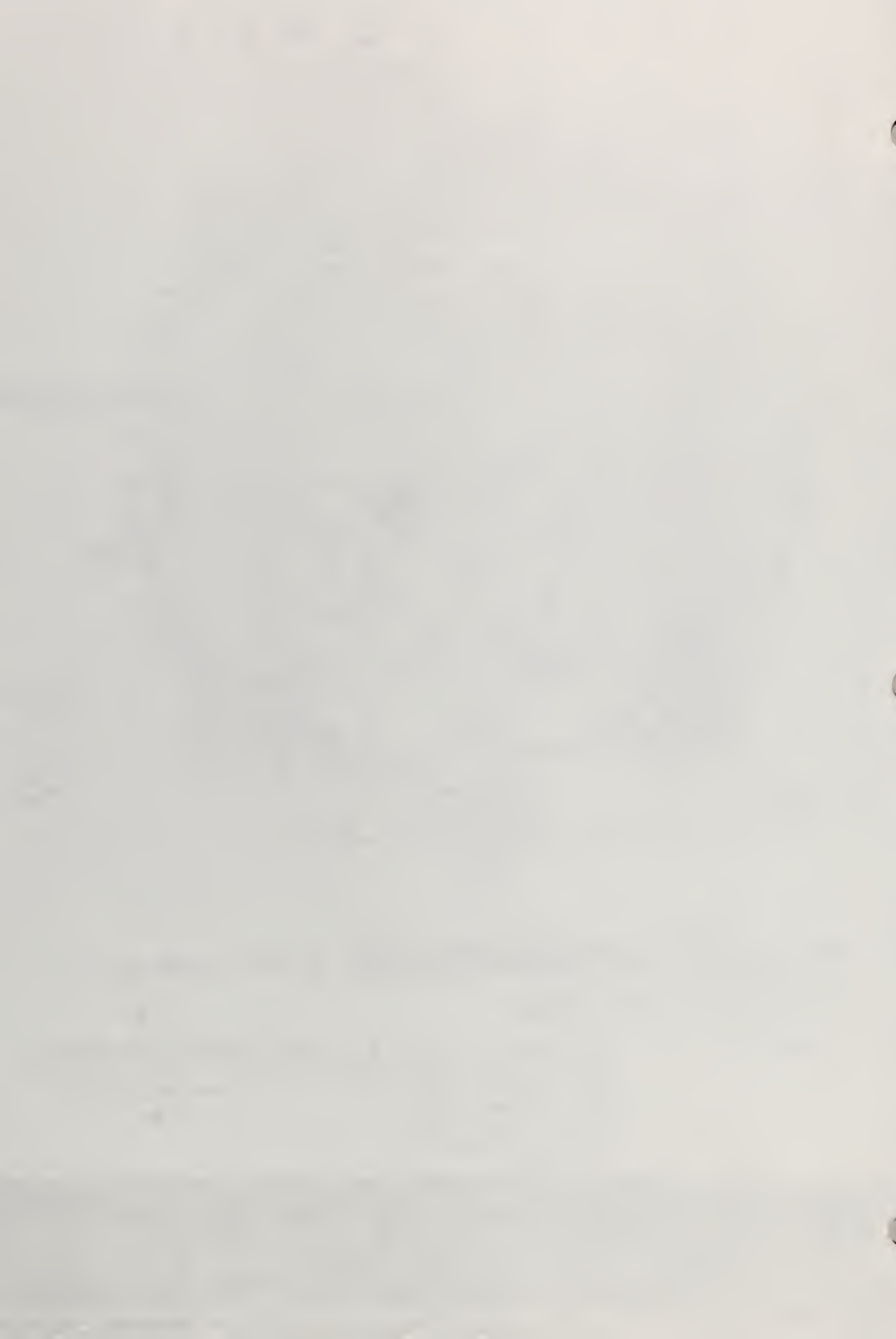
REVISED AUGUST 1975

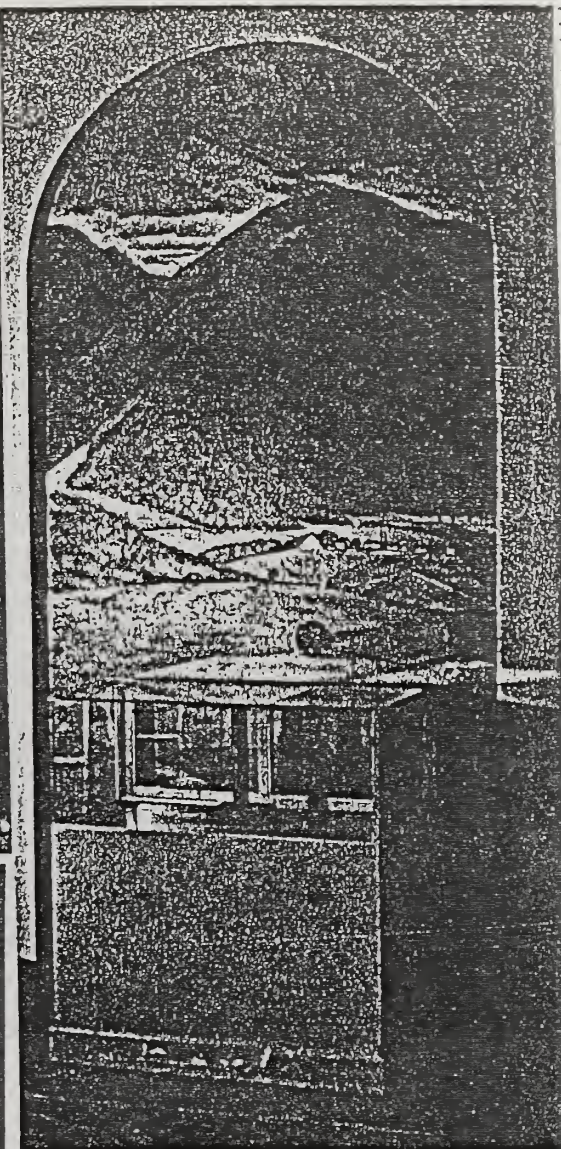
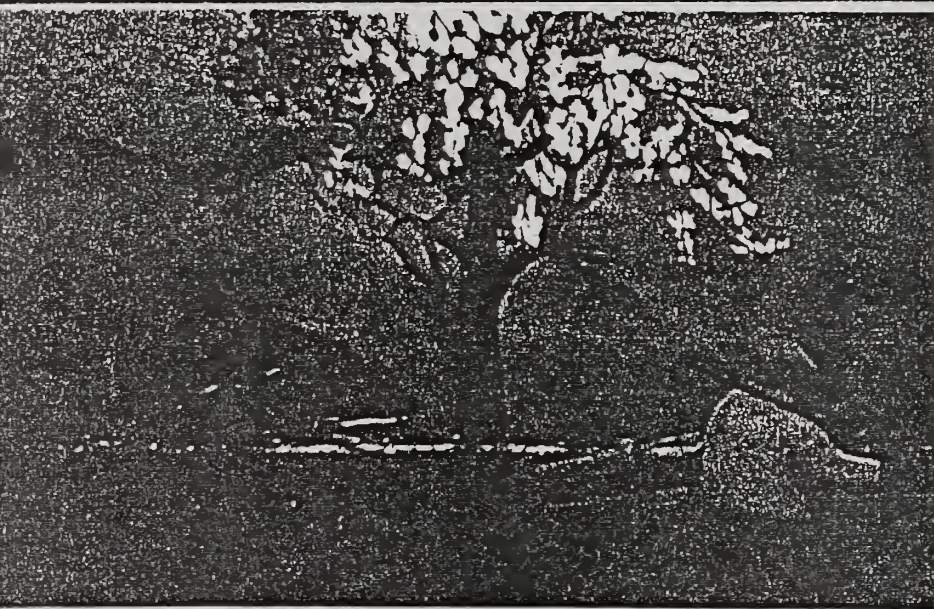
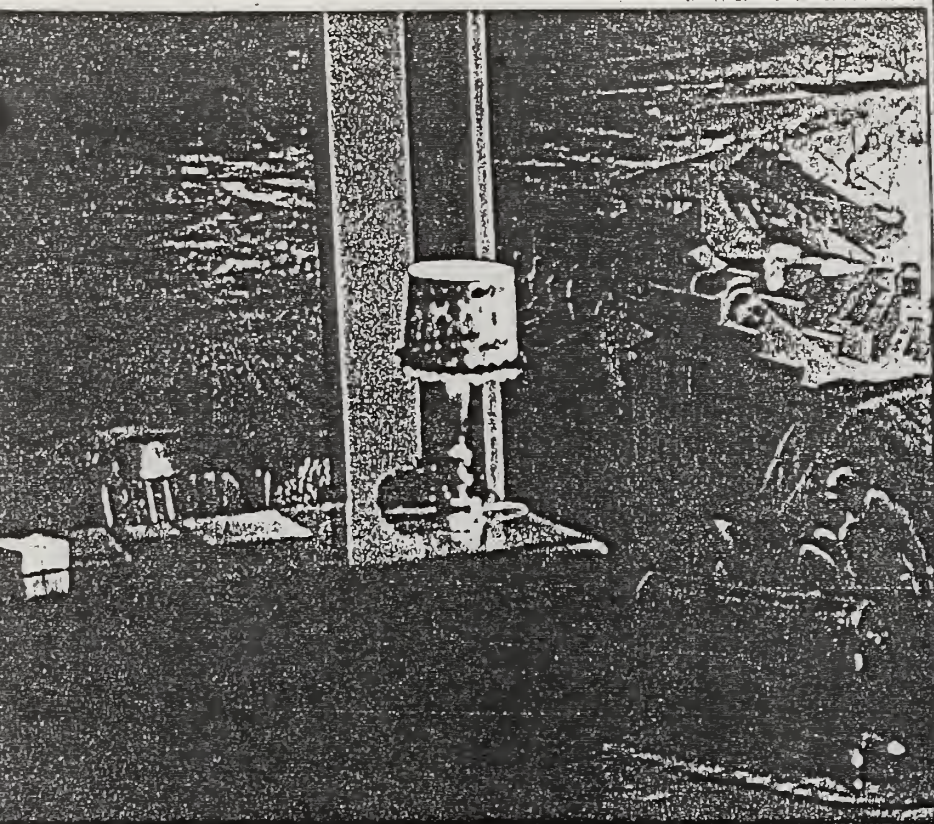
DPW-BUREAU OF BUILDING REPAIR

Materials:	30	30	removable posts & sockets(anodized aluminum)
	6	12	- 4'long ropes(naughyde-sizes to be verified)
	-	2	- 5'long ropes (maroon color)
	23	15	- 6'long ropes
	-	6	- 9'long ropes
	6	12	wall plates
	2	2	signs

EXCELLENT PLAN FOR ELIMINATING TICKET-SELLING DESK FROM LOBBY

originated and drawn by architect Hungen-Groth (Bureau of Building Repair). This plan takes advantage of an existing space next to the elevator. It would make a vast improvement in function and appearance and would be minimal in cost.





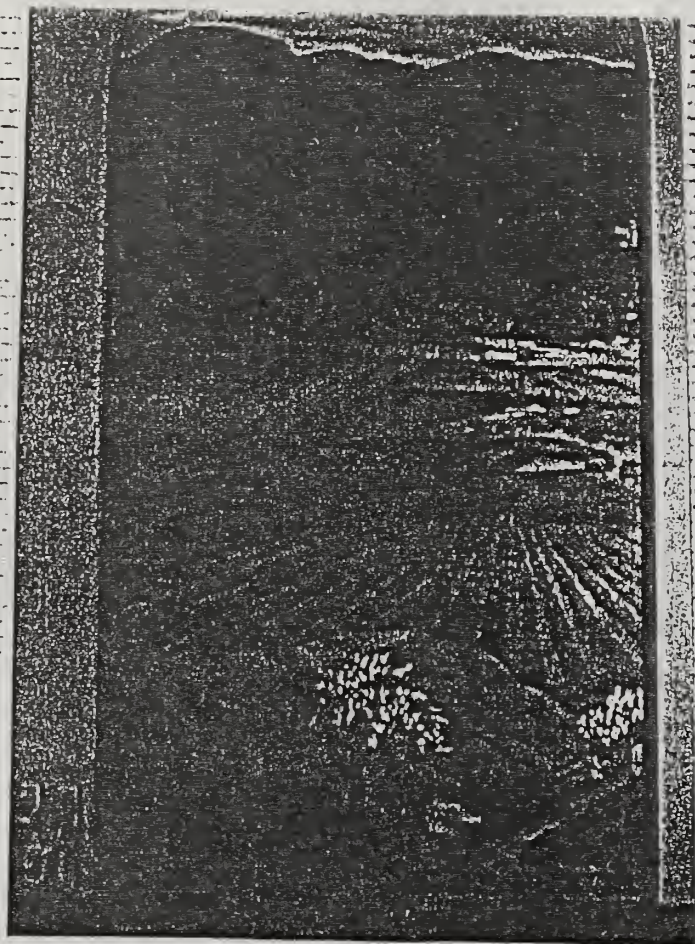
ELEVATOR LOBBY

2

Scratch from chair on painting behind desk..

The photographs on this page show the elevator lobby as it is today. It is much too dark to see the beautiful oil landscapes by Rinaldo Cuneo. They are also half concealed by the desk and a display case. The oil by Moya del Pino, to the right of the desk, is being damaged by a 200-volt electric heater placed near it.

Beamer-Wilkenson, an excellent lighting firm who do museum work, have made several suggestions on ways to improve the lighting. One is simply to remove the etched glass tubes from the center fixture, releasing more light from the two 200-watt bulbs. Another possibility would be shaped lights installed around the ceiling fixture and focused on the paintings.



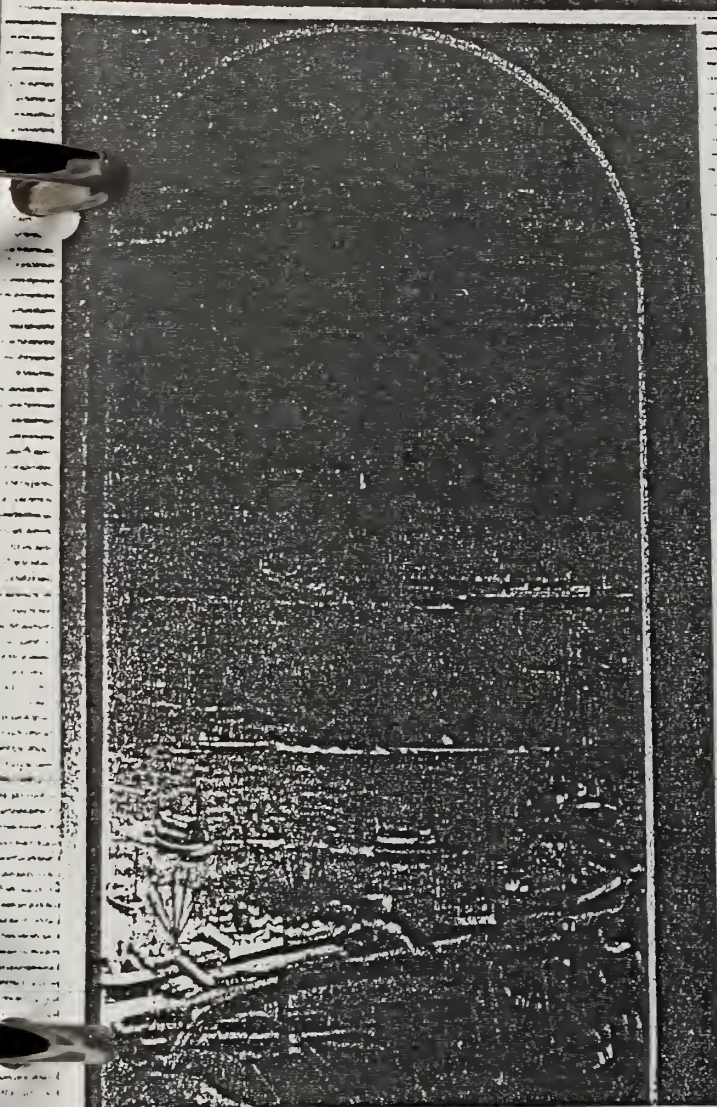
landscape by Rinaldo Cuneo

Rinaldo Cuneo's beautiful landscape is behind the desk, and so poorly lighted that it is almost invisible. Lighted, it becomes a richly-colored painting which adds to the beauty of this very simple, pleasant small room. To its left are the two green doors which could be used for the ticket-selling operation. (See drawing by Groth)



Moya del Pino's painting to the right of the desk. Note the brown square in the sky (detail below in black and white). This was the film of dirt we removed, which covered all of these paintings.

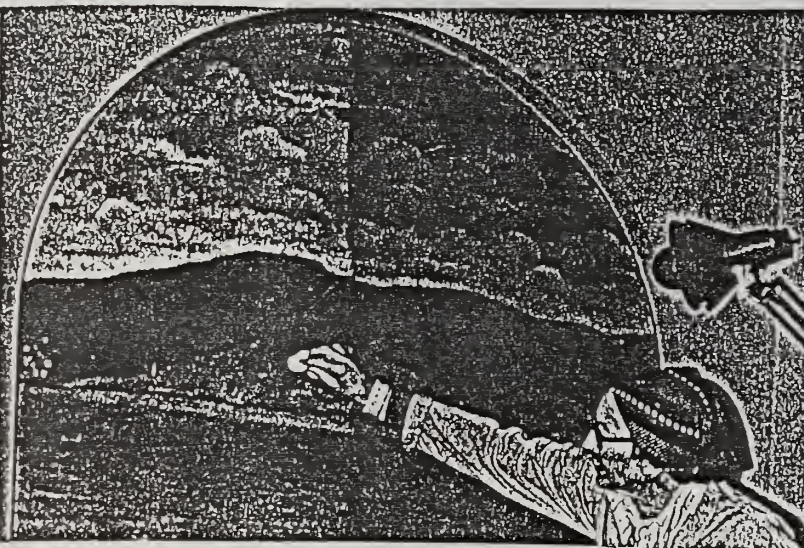




painting by Otis Oldfield;



Rinaldo Cuneo



Emmy Lou Packard working on
half-cleaned painting.

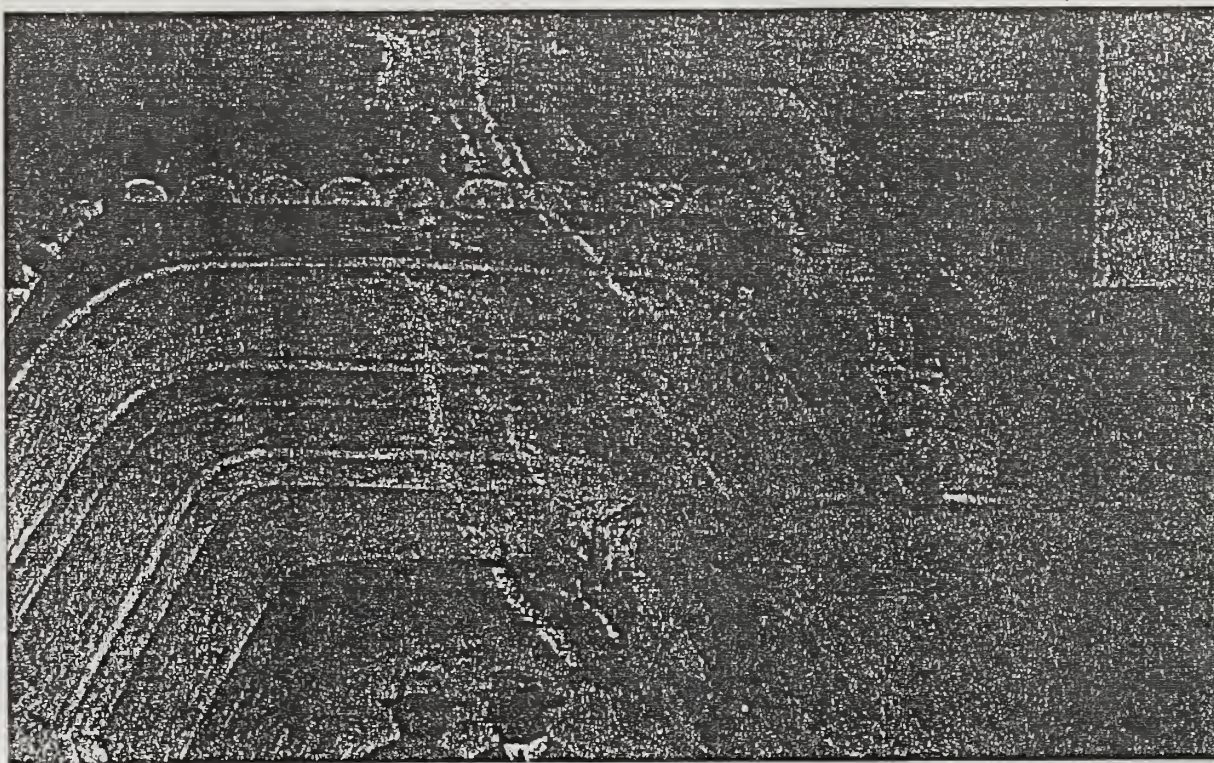
The four oils and the two lunettes in the elevator lobby were cleaned carefully according to instruction by the foremost experts in the field of restoration. Then, on the same advice, the paintings were varnished with acrylic.

photograph by Emmy Lou Packard

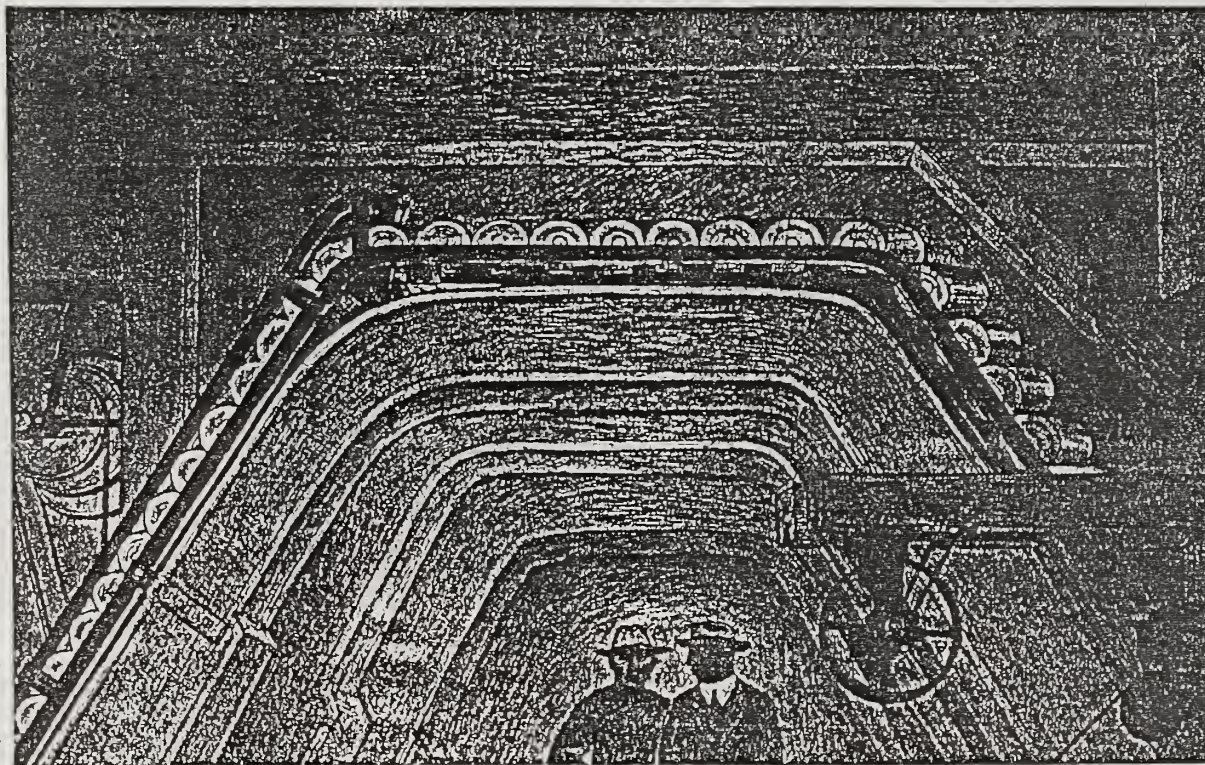


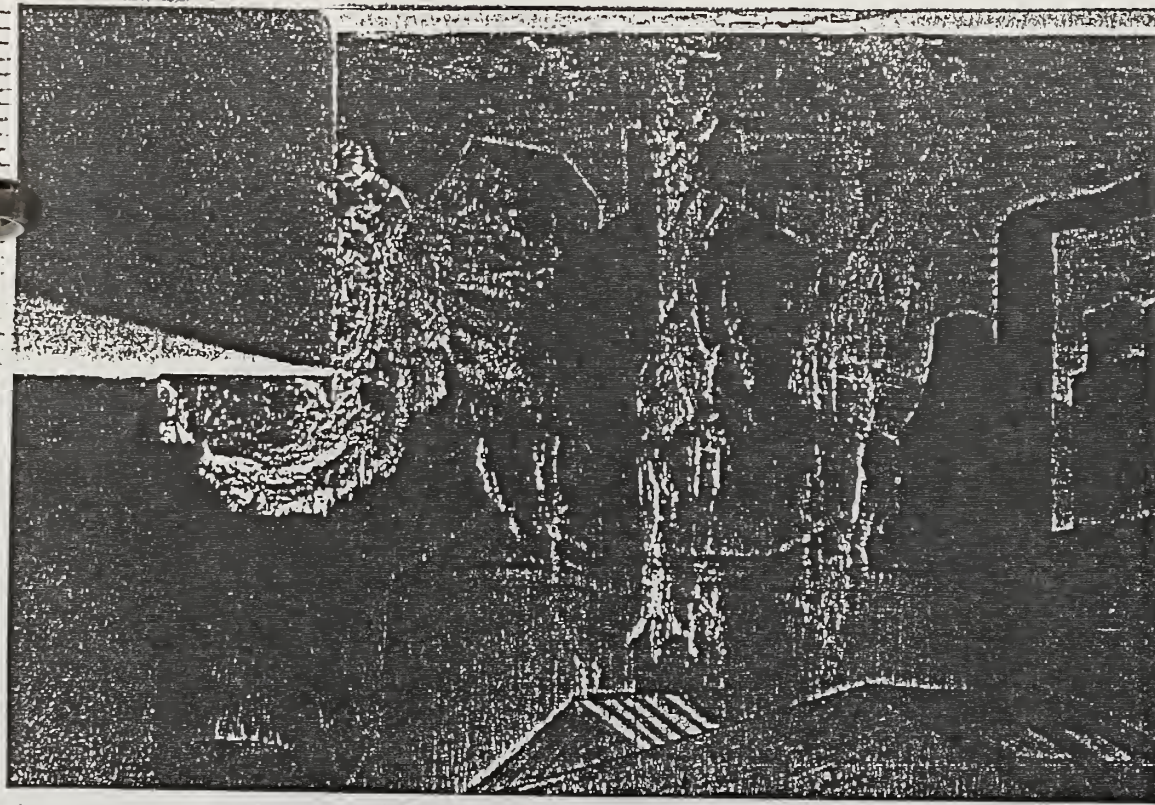
Assistant restorer Rosinda Holmes discusses cleaning of the del Pino oil painting with attendant Wilson.

1975

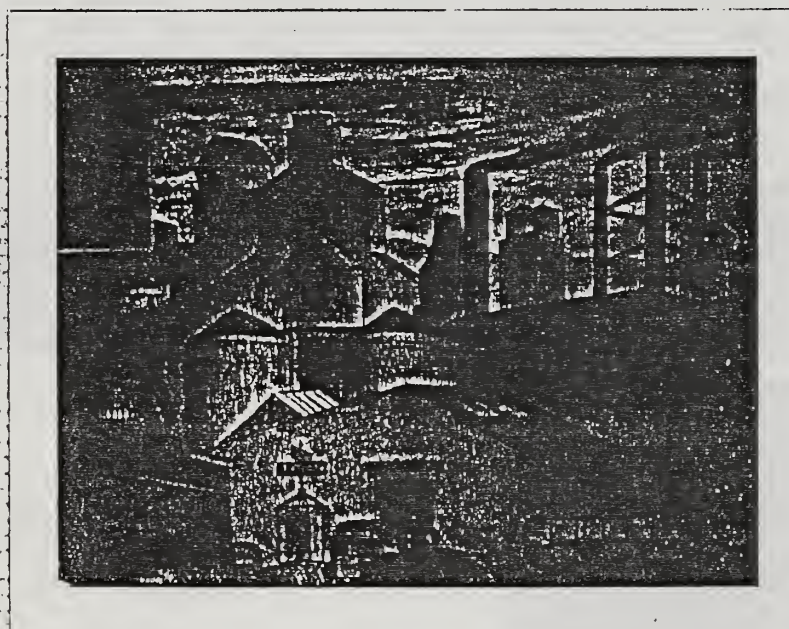


RALPH STACKPOLE - fresco, inner west wall. Photographs show rain damage at top right corner of this mural. The plaster in this area is quite rough. Lower photograph shows damaged areas after they were retouched with Liquitex (acrylic). Another area over the center door showed a white circle near the ceiling where water had seeped in. This, as well as several other smaller areas were matched with acrylic paint.

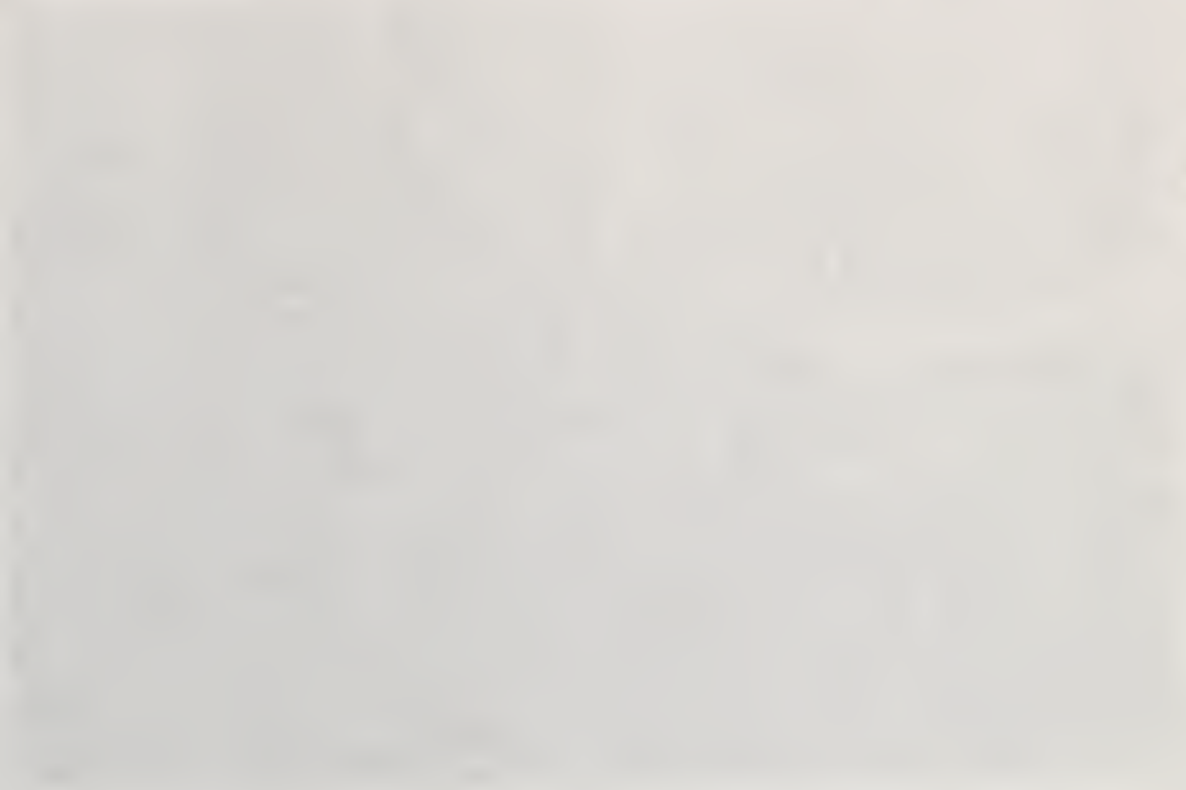


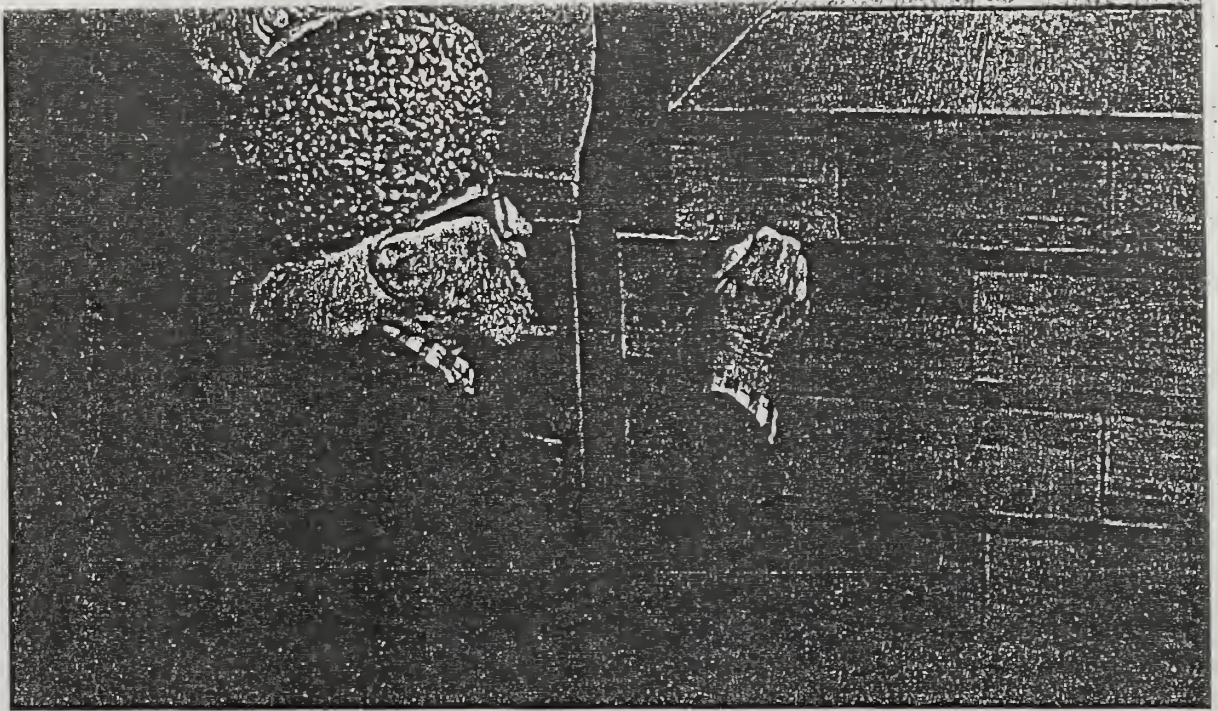


VICTOR ARNAUTOFF fresco - inner south wall. Extensive rain damage has weakened the plaster and destroyed some of the color from floor to ceiling. Color areas were retouched with acrylic (Liquitex). I replaced only a small area of plaster, and was surprised to find no wire mesh between the plaster and the smooth concrete wall. I hope this isn't the case throughout the building. At the top (see photographs) I think moisture may still be coming through. If this can't be stopped, the paint will continue to flake off.



Arnautoff fresco after repair with lime putty and marble-dust, then acrylic (Liquitex) to complete retouching.





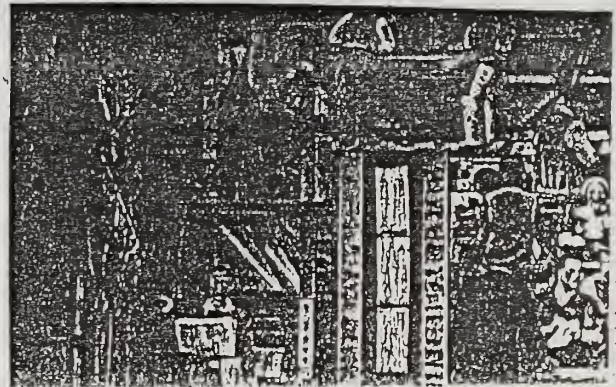
BERNARD ZAKHEIM re-signing his name where it had worn off as a result of rain leaking under the narrow window in the center of his library mural. (outer south wall) 1975

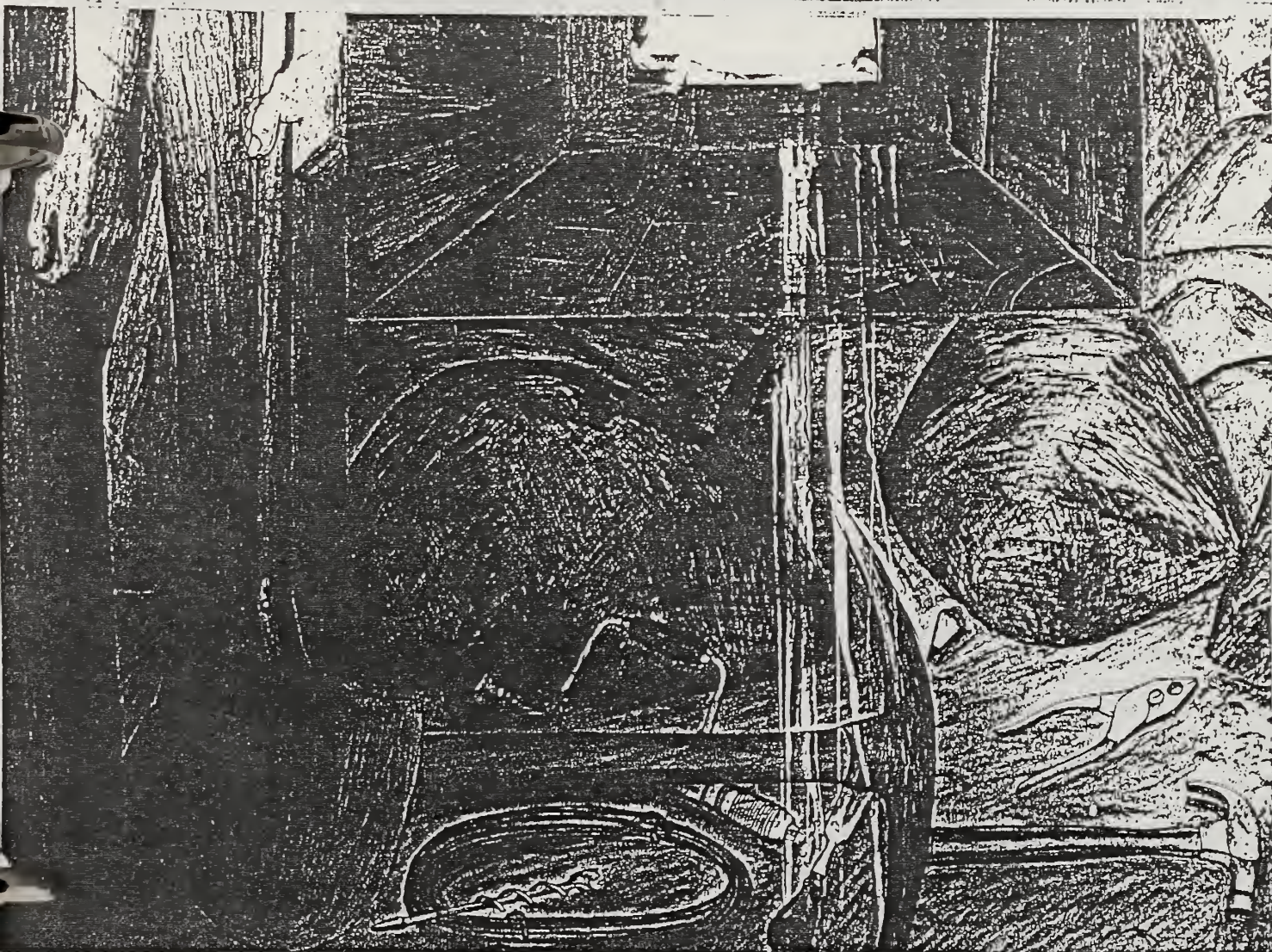
ARCHITECT ARTHUR BROWN placed two narrow windows in the centers of the frescos in the corners of the outer lobby. I believe these should be permanently sealed off for the following reasons:

1. They serve no useful purpose, are not used for air.
2. Rain drives under them in winter, washing the fresco painting away in the area below the windows.
3. At night, children shoot BB's at these windows, breaking the glass.
4. Glaziers knock holes in the plaster while replacing the glass because of the confined space they have to work in.

TO SAVE COST OF CONSTANT REPLACEMENT AND DAMAGE TO PLASTER, these narrow windows should be glazed with bullet-proof plastic glass (available under several brand names). To cut down the blinding light which prevents one seeing the corner frescos clearly, a 1/8" pane of gray plexiglass might be placed over the inside of the small panes.

Photographs demonstrate the difficulty of seeing the murals next to the brilliant light that comes through the windows.





Rain damage under narrow window in fresco by John Langley Howard

Beside the two large areas of rain damage shown on the previous page, Rosinda Holmes and I repaired extensive damage around the eight narrow windows: six to ten chips in the plaster from window replacement on every one of the narrow windows; rain damage similar to the example shown above, under every window; on the fresco walls in the outer hall, ground floor galleries, stairs and upstairs walls we repaired and retouched 565 small scratches, chips, holes in the fresco plaster.

All of the frescos were retouched with thin acrylic*(Liquitex and distilled water). Under the windows we added two coats of matte medium to protect this area from rain damage, after retouching.

*This is the only medium beside watercolor which is recommended by restorers (see list in back of book) for retouching fresco.

PAINTING AND RESTORATION EXPERTS CONSULTED

Cleaning and restoration are procedures subject to advice from many people. To protect the City from self-appointed experts I list below the authorities I consulted for the latest advice on how to restore and protect frescos and murals painted in oil on canvas:

Ralph Mayer, author of Artists' Handbook (New York)

Henry Rusk - for thirty years in charge of restoration for the Legion of Honor, deYoung Museum and the City of San Francisco

Instituto de Restauero de Pintura Mural (Mexico City)

Departamento de Restauraciones de Pintura Mural (Mexico)

In Mexico I also consulted with fresco painters Juan O'Gorman and Pablo O'Higgins.

Books: Mayer's Artists Handbook and
Max Doerner's Materials of the Artist

Larry Lee Packard
August, 1975

Handwritten text, mostly illegible due to extreme blurriness. It appears to be a list or a series of entries, possibly a ledger or a record book. The text is written in a cursive script, likely from the 19th or early 20th century. The entries are organized into columns, with some headings that are difficult to decipher. The overall appearance is that of a historical document or a manuscript.

Handwritten text at the bottom of the page, possibly a signature or a date. It is written in a cursive script and is partially obscured by the blurriness of the image. The text appears to be a name followed by a date, possibly "1871".



EMMY LOU PACKARD

3350 EIGHTEENTH STREET SAN FRANCISCO 94110 415/863-2827

August 6, 1975

Martin Snipper
Executive Secretary, Art Commission
San Francisco

Dear Martin:

I'm just completing the restoration in Coit Tower. I'm compiling an official report with procedure and photographs for your files.*

Coit Tower is actually one of the most beautiful art museums in San Francisco. Its location is superb, of course, and thousands of tourists are drawn to the fine view of the city. But as they enter the building they're fascinated by the murals inside which for the most part are closed to the public. The public really wants to see them, and should be able to.

I realize why they were closed in 1960 after Dorothy Cravath (under Henry Rusk's direction) retouched the many areas where initials and names had been scratched in the soft fresco plaster. I've been studying the problem and discussing it with many people, including museum curators, industrial designers and architects. The consensus is that the best solution is simple and not very costly. (The details I'll outline on the accompanying suggestion sheet.) The changes I suggest could easily be made in six weeks.

Many people coming to the tower ask for a brochure. This should be available. I've collected biographies and photographs of the artists already, and the California Historical Society is anxious to help. A former museum board-member is willing to serve on the committee. If the City is not able to afford such a printing, I'm certain that for such good public relations the industries shown in the murals could be sources of financing. Organized labor would sponsor it, I'm sure. The brochure could be a source of income from Coit Tower.

Perhaps in about two weeks you would take time to come up and see the restoration and talk over the proposed improvements. Your approval would be most important.

* Such reports should be required from everyone restoring works of art for the City. I would have been saved much research time if such a report had been made by Cravath or Rusk.

best,



ART COMMISSION CITY AND COUNTY OF SAN FRANCISCO

August 7, 1975

Ms. Emmy Lou Packard
3350 Eighteenth Street
San Francisco
California 94110

Dear Emmy,

Thanks for your letter and the concern it expresses for the Coit Tower Murals - their preservation and the importance of making them accessible to the public.

About a year or two ago the Board of Supervisors passed an ordinance which charges the Art Commission with the responsibility of preserving and maintaining public works of art. However, the Recreation and Park Department, War Memorial and the Museums are excluded, by virtue of the charter, from our jurisdiction.

Under these circumstances, we are in the position of only using our good offices in recommending to the Recreation and Park Department that they give serious consideration to your thoughtful proposal.

I am sending them a copy of your letter, proposal, and this reply, and will contact them within a week or so to see if they are receptive to your suggestions.

Call me when you are finished and we will see what we can do.

My best,

Martin Snipper
Director

MS:je

cc: Ruth Asawa, Chairman-Visual Arts Committee
Jack Spring, Recreation & Park Dept.
Tom Malloy, Recreation & Park Dept.



(A) City College uses posts
with wire glass between
to protect Rivera mural -

CORNELIUS SAMPSON & ASSOCIATES • INDUSTRIAL & GRAPHIC DESIGN • 69 WATER STREET, SAN FRANCISCO, CALIFORNIA 94133 • (415) 474-2822

Emmy Lou Packard
3350 18th Street
San Francisco, CA 94110

July 9, 1975

Dear Emmy:

I have selected a color which I think will work as a wall color in the lobby of Coit Tower. It is from the Lucite Designer System by Dupont, name Greyhound, number 80-4-C. This will minimize finger markings and will stand considerable washing. A semi-gloss will stand washing better than a completely flat surface. I have painted out a 6" x 10" swatch which approximates the color.

Lighting:

Incandescent General Electric Floods and/or Spots to raise general illumination in the lobby to 40 foot candles with one spot on each mural should do the job. Two floods in the outer lobby should help balance light on the murals on either side of the door.

Mr. Calvilla of Golden Gate Lighting Company, 3201 Mission Street, 285-5445, will meet with us at Coit Tower to make exact recommendations and cost estimates.

Buffer Rail for Outside Lobby Murals:

(A)
Here I recommend posts and railings, framing glass in 24" x 49" horizontal sections. The posts and railings should match the anodized aluminium of the doors. With posts set 36" from the mural wall 42" high, this will allow 1' clear at the bottom for cleaning and be too narrow for children to crawl under. This measure assumes that the aluminium framing will add 2" top and bottom to the height of the glass.

The contractor can put in gates where necessary to allow access to doors.

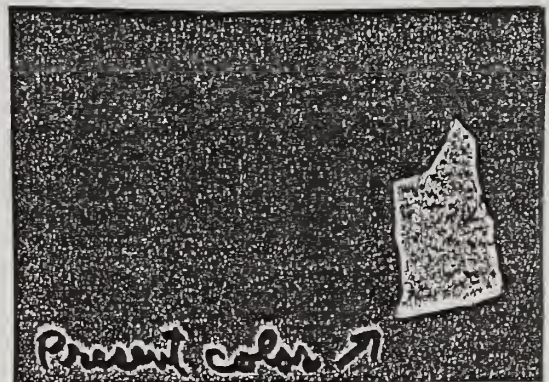
I will be out of town until Monday July 21. If you want to get going sooner you can call Mr. Calvilla and go ahead.

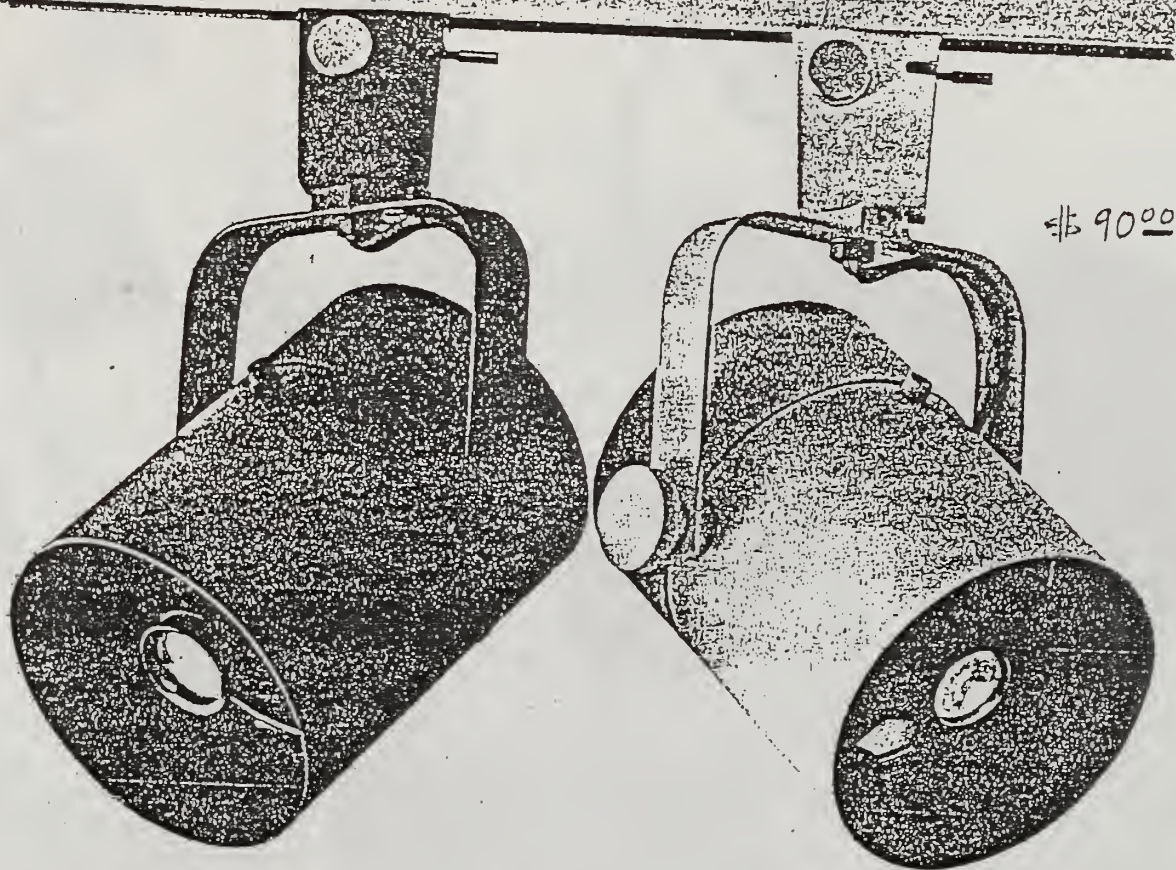
Cordially,

NEIL

Cornelius Sampson

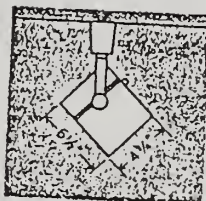
CS/g





Dramalux Framing Projector

Precise optical instrument for cutting edges of light beams to the desired shape and size. Confines light accurately within the outline of object or painting, avoiding distracting light spill. Uses compact, long-life 100W T-4, 120V tungsten-halogen lamp. Concealed adjustable shutters provide wide range of quadrilateral shapes; drop-in templates provide sharp-edged round beams of varying diameters. Front of housing removes for easy relamping. Unit provides positive locking of horizontal aiming up to 350°, vertical up to 90°. For features of attachment fitting, see page 34.



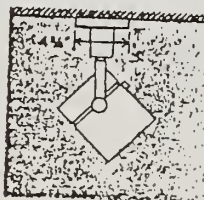
100W 120 Volt
Mini-Can Base

7644
Matte Black

7645
Matte White

□ 100W T-4 Clear
(Dimmable)

By Symantec



Monopoint Only

7604

Matte White

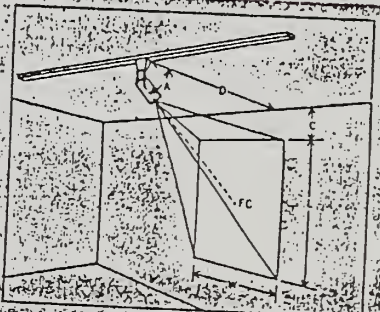
LIGHTING DATA FOR FRAMING PROJECTOR

MAXIMUM BEAM COVERAGE AND ILLUMINATION ON VERTICAL PLANE AT TYPICAL AIMING ANGLES OF 30°, 45° AND 60° FROM HORIZONTAL WITH SHUTTERS FULLY OPEN

EXAMPLE

Problem: Approximately 30 f.c. is required to light an 18" wide by 36" high painting mounted on a wall 30" down from the ceiling.

Solution: The table for Illumination on a vertical plane shows that at a 60° aiming angle (the optimum for pictures on a wall) a maximum rectangle 24" wide by 62" high, 26" down from the ceiling, can be obtained when the Framing Projector is located 24" from the wall. The illumination will be 25 f.c. on the beam axis. The shutters can then be used to reduce the lighted area to the size of the painting.

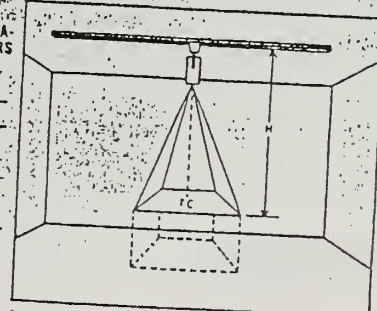


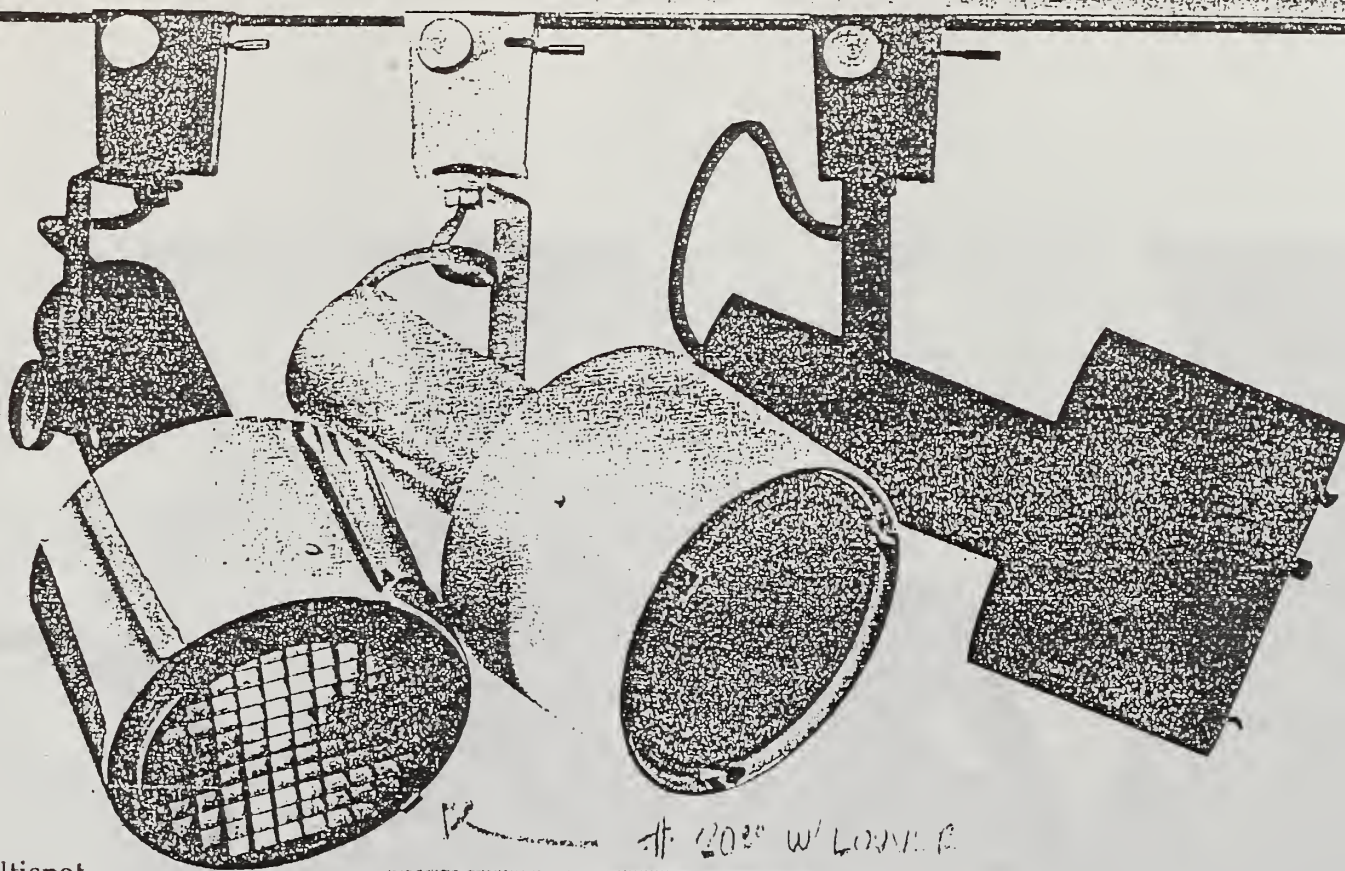
DISTANCE (D)	24"	36"	48"	60"	72"	84"	96"
AIMING ANGLE (A) (from horizontal)	30° 45° 60°	30° 45° 60°	30° 45° 60°	30° 45° 60°	30° 45° 60°	30° 45° 60°	30° 45° 60°
DISTANCE (C) (Min.)	11" 18" 26"	12" 23" 36"	14" 28" 45"	16" 33" 54"	17" 38" 63"	19" 43" 72"	20" 48" 82"
WIDTH (W) (Max.)	18" 20" 24"	28" 31" 36"	38" 41" 49"	48" 52" 61"	58" 63" 74"	68" 74" 86"	78" 84" 99"
LENGTH (L) (Max.)	26" 34" 62"	40" 52" 94"	54" 71" 127"	68" 89" 160"	82" 108" 195"	96" 127" 225"	110" 145" 257"
F.C. ON BEAM AXIS	141	74 25	59 31 11	32 17 6	20 11 4	14 7 3	10 5 2

Length (L) to the point where illumination drops to 10% of illumination on beam axis.

MAXIMUM BEAM COVERAGE AND ILLUMINATION ON HORIZONTAL PLANE WITH SHUTTERS FULLY OPEN.

DISTANCE (H)	4'	5'	6'	7'	8'	9'	10'	11'	12'
SQUARE LIGHTED AREA (Max.)	32"	42"	52"	62"	72"	81"	91"	101"	111"
F.C. ON BEAM AXIS	70	41	27	19	14	11	8	7	6

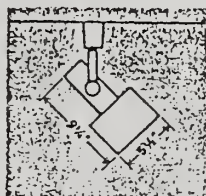




Multispot

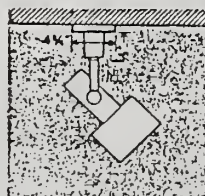
Economical spotlight/floodlight, crisply articulated in all matte white, all matte black or matte black with polished chrome shield. Accepts wide variety of PAR and R lamps from 75W to 300W, including cool beam and high-wattage tungsten-halogen or krypton, as well as standard incandescent lamps. Shield, securely clipped to housing, has regressed rim to provide a clean, secure seat for optional 4 3/4" dia. lenses, filters and louver.

Lampholder adjusts for R-30, R-40 and PAR-38 lamps. May be adjusted horizontally up to 350°, vertically up to 180°. For features of attachment fitting, see page 34.



75W-300W
7624
Matte Black and
Polished Chrome

7625
Matte Black
7626
Matte White



Monopoint Only
7604
Matte White

Accepts any
size of any
single lytespot
over existing 4"
octagonal outlet
for retrofit
to spot service only

50 00

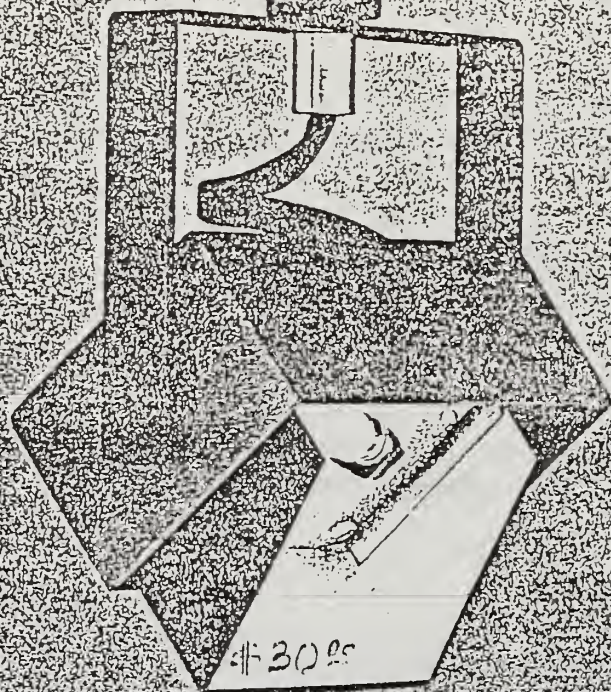
90 00

93453

EDERNEITENS

93454

EDAMING



WALL WASHER provides uniform rectangular beam pattern with precise cut-off and no scalloping for illumination of walls and surfaces or general flood lighting. FRESNEL LENS PROJECTOR provides an adjustable optical system which can be focused to produce soft edged spot or medium floodlight patterns. Positive serrated lock-up engagement assures fixed aiming.

FRAMING PROJECTOR provides high intensity sharp edged rectilinear beam patterns by means of adjustable shutters. Precision focusing lens system keeps patterns sharp at all distances. Positive serrated lock-up engagement assures fixed aiming.



93458

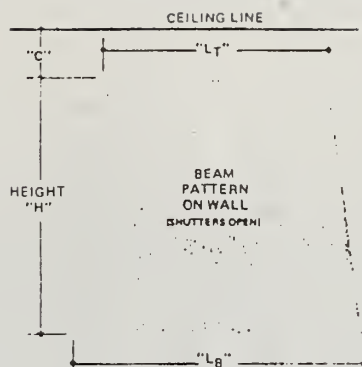
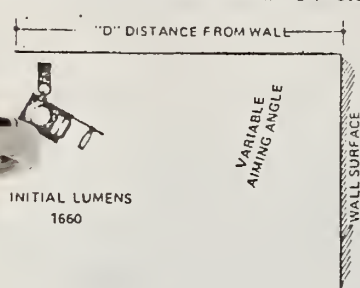
WALL WASHER

Q 250W or Q 150W quartz halogen, single end, double contact bayonet socket

For lighting data see page 37

100W, G-16 1/2 CLEAR

FOR USE WITH NO. 93454 FRAMING PROJECTOR.



NOTE: BEAM PATTERN MAY BE
VARIED BY ADJUSTING SHUTTERS

BEAM COVERAGE DIMENSION FACTORS

AIMING ANGLE	MULTIPLY "D" BY FACTORS FOR BEAM PATTERN DIMENSIONS			
	L _T *	L _B	H	C
30°	.43	.54	.55	.33 + 8 INCHES
45°	.49	.74	.85	.68 + 8 INCHES
50°	.52	.85	1.05	.80 + 8 INCHES
55°	.56	1.02	1.35	.95 + 8 INCHES
60°	.61	1.28	1.86	1.13 + 8 INCHES

AVERAGE FOOTCANDLES

AIMING ANGLE	"D" DISTANCE FROM WALL (INCHES)						
	24"	30"	36"	42"	48"	54"	60"
30°	90	58	40	30	23	18	14
45°	50	32	21	17	12	11	8
50°	37	24	16	12	9	7	6
55°	26	17	11	9	7	5	4
60°	17	11	8	6	4	3	2

AIMING ANGLE	BEAM PATTERN DIMENSIONS IN INCHES ("D" = 38 INCHES)			
	L _T *	L _B	H	C
30°	15.5	19.4	19.8	19.9
45°	17.6	26.6	30.6	31.8
50°	18.7	30.6	37.8	38.8
55°	20.2	36.7	48.8	42.2
60°	22.0	46.1	67.0	48.7

* L_T: USE THIS DIMENSION FOR MAX. SQUARE BEAM PATTERN

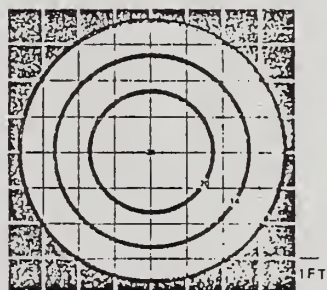
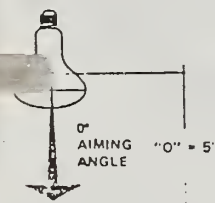
50W, R-20

FOR APPROXIMATE ILLUMINATION
USING 30W, R-20 LAMP
MULTIPLY FOOTCANDLE VALUES BY .49.

INITIAL LUMENS 310

APPROX. BEAM SPREAD
TO 10% MAX. C.P. 80°

SPACING TO
DISTANCE RATIO
(FOR UNIFORM LIGHTING) .70



DISTANCE AND FT.-C. CORRECTION FACTORS

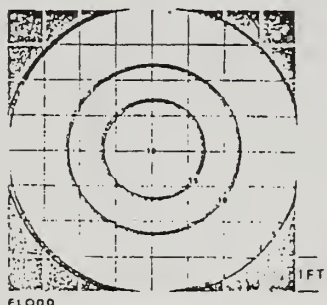
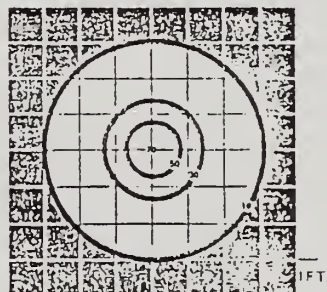
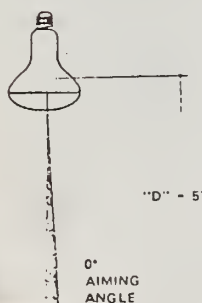
DISTANCE "D" (FEET)	MULTIPLY	
	CHART DISTANCES BY	CHART FT.-C BY
1.0	0.2	25.0
1.5	0.3	11.1
2.0	0.4	6.3
3.0	0.6	2.8
4.0	0.8	1.6
5.0	1.0	1.0
6.0	1.2	0.7
7.0	1.4	0.5
8.0	1.6	0.4

75W, R-30

INITIAL LUMENS 900

APPROX. BEAM SPREAD
TO 10% MAX. C.P. 78°

SPACING TO
DISTANCE RATIO
(FOR UNIFORM LIGHTING) .40



DISTANCE AND FT.-C. CORRECTION FACTORS

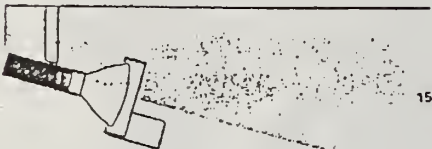
DISTANCE "D" (FEET)	MULTIPLY	
	CHART DISTANCES BY	CHART FT.-C BY
2.0	0.4	6.3
2.5	0.5	4.0
3.0	0.6	2.8
4.0	0.8	1.6
5.0	1.0	1.0
6.0	1.2	0.7
7.0	1.4	0.5
8.0	1.6	0.4
10.0	2.0	0.3
12.0	2.4	0.2
15.0	3.0	0.1
1.0	0.2	25.0
1.5	0.3	11.1
2.0	0.4	6.3
3.0	0.6	2.8
4.0	0.8	1.6
5.0	1.0	1.0
6.0	1.2	0.7
7.0	1.4	0.5
8.0	1.6	0.4
10.0	2.0	0.3
12.0	2.4	0.2

Q250W, PAR-38 QUARTZ

FOR USE WITH NO. 93451 w/93449.

INITIAL LUMENS

3220



FIXTURE MOUNTED 3 FEET FROM WALL

DISTANCE FROM CEILING IN FEET	DISTANCE ALONG WALL IN FEET (SINGLE UNIT)					UNITS ON 2 FOOT CENTERS			UNITS ON 3 FOOT CENTERS		
	0	1	2	3	4	Directly Ahead Of One Unit	Midpoint Between Units	Directly Ahead Of One Unit	Directly Ahead Of One Unit	Midpoint Between Units	Directly Ahead Of One Unit
1	15.6	15.0	8.7	3.9	1.8	36.6	39.6	36.6	23.4	26.4	23.4
2	33.1	30.1	17.7	8.6	3.7	75.9	81.0	75.9	50.3	53.3	50.3
3	45.9	43.9	27.6	13.0	5.8	112.7	119.6	112.7	71.9	80.2	71.9
4	40.9	39.9	29.1	17.0	7.6	114.3	121.0	114.3	74.9	80.2	71.9
5	32.7	30.6	24.7	17.5	9.4	100.9	105.8	100.9	67.7	69.5	67.7
6	24.8	23.6	19.6	14.3	9.0	82.0	87.0	82.0	53.4	57.8	53.4
7	19.1	18.4	15.4	12.0	8.8	67.5	71.6	67.5	43.1	48.0	43.1
8	13.7	13.2	11.4	9.2	7.1	50.7	54.8	50.7	32.1	36.7	32.1
9	10.7	10.1	9.0	7.7	5.9	40.5	44.4	40.5	26.1	29.4	26.1
10	8.1	7.7	6.5	5.8	4.6	30.3	34.8	30.3	19.7	22.7	19.7
11	6.2	6.0	5.5	4.5	4.0	25.2	27.4	25.2	15.2	18.7	15.2
12	4.5	4.5	3.9	3.6	3.2	18.7	21.4	18.7	11.7	14.2	11.7

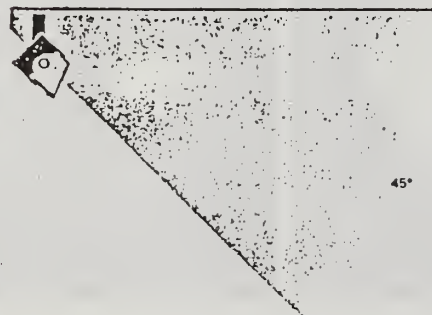
Q250W, T-4 QUARTZ, FROSTED

FOR USE WITH NO. 93458.

FOR APPROXIMATE ILLUMINATIONS
USING 150W T-4 QUARTZ LAMP
MULTIPLY FOOTCANDLE VALUES BY .58.

INITIAL LUMENS

4850



FIXTURE MOUNTED 4 FEET FROM WALL

DISTANCE FROM CEILING IN FEET	DISTANCE ALONG WALL IN FEET (SINGLE UNIT)					UNITS ON 3 FOOT CENTERS			UNITS ON 4 FOOT CENTERS		
	0	1	2	3	4	Directly Ahead Of One Unit	Midpoint Between Units	Directly Ahead Of One Unit	Directly Ahead Of One Unit	Midpoint Between Units	Directly Ahead Of One Unit
1	88.2	72.2	43.0	18.5	7.4	126.8	130.8	126.8	103.0	87.8	103.0
2	104.0	98.4	61.7	23.8	9.2	153.7	192.6	153.7	122.5	125.5	122.5
3	98.4	76.4	48.4	24.3	10.4	149.5	139.0	149.5	119.3	99.3	119.3
4	77.8	62.9	44.4	25.7	10.9	132.5	122.4	132.5	99.8	92.1	99.8
5	49.0	42.2	33.2	26.4	13.7	105.8	94.8	105.8	76.8	70.2	76.8
6	30.4	27.8	21.9	16.4	12.0	68.8	72.2	68.8	55.2	49.1	55.2
7	17.4	16.3	13.9	10.4	7.9	44.3	46.4	44.3	34.3	33.7	34.3
8	10.2	9.8	8.6	6.7	5.2	29.2	30.4	29.2	22.0	22.5	22.0
9	6.3	6.1	5.5	4.4	3.6	20.0	20.6	20.0	15.0	15.4	15.0
10	4.2	4.1	3.6	3.0	2.5	14.3	14.9	14.3	10.8	11.0	10.8
11	2.9	2.9	2.5	2.0	1.8	10.5	11.1	10.5	8.0	8.2	8.0
12	2.0	2.0	1.8	1.5	1.3	7.9	8.5	7.9	6.0	6.2	6.0

Q250W, T-4 QUARTZ, CLEAR

FOR USE WITH NO. 93443.

INITIAL LUMENS

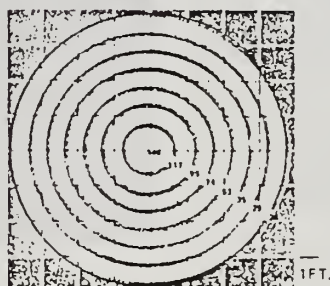
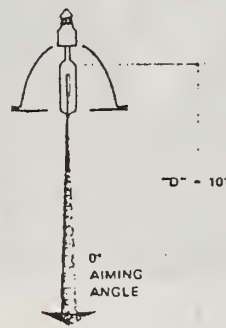
4850

APPROX. BEAM SPREAD
TO 10% MAX. C.P.

43°

SPACING TO
DISTANCE RATIO
(FOR UNIFORM LIGHTING)

.36



DISTANCE AND FT.-C. CORRECTION FACTORS

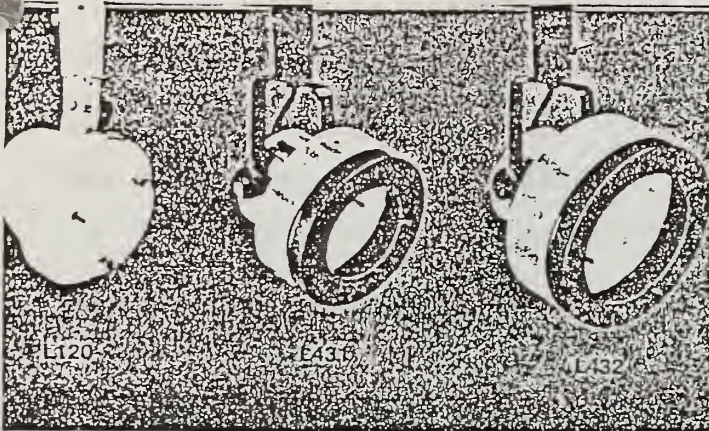
DISTANCE "O" (FEET)	MULTIPLY	
	CHART DISTANCES BY	CHART FT.-C BY
2.5	.3	16.0
5.0	.5	4.0
7.5	.8	1.8
10.0	1.0	1.0
12.5	1.3	0.6
15.0	1.5	0.4
17.5	1.8	0.3
20.0	2.0	0.3
25.0	2.5	0.2
30.0	3.0	0.1

SIDE AND END-PRONG LAMP UNITS*

L120 — Heavy-duty lampholder. Accommodates "L200 Series" color filters and L272 Louver.

L431 — "Continental-style" lampholder. Accommodates "L200 Series" color filters and L272 Louver.

L432 — "Continental-style" lampholder. Accommodates "L300 Series" color filters and L372 Louver.



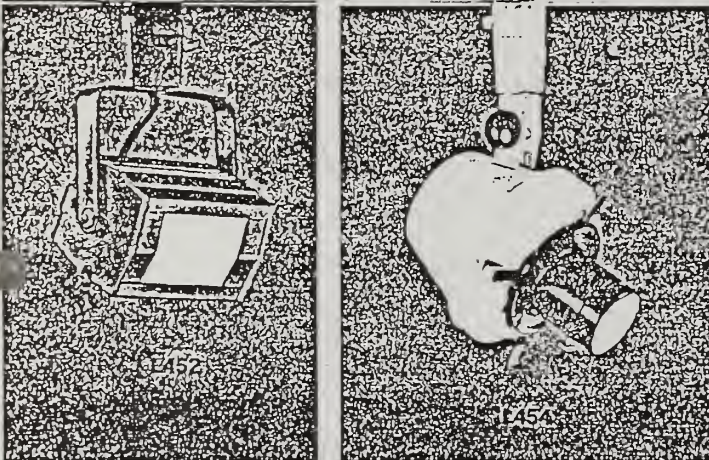
CAT. NO.	FINISH CODE	LAMPS	FIXTURE		O A HT
			LGTH	DIA	
L120	P or MB	Med. Side Prong lamps: 150W PAR 38/3 SP, FL 200W PAR 46/3 NSP, MFL	5 1/4"	6 3/4"	12 1/4"
L431	AL	Same lamps as above	5 1/4"	7"	12 1/4"
L432	AL	Mogul End Prong lamps: 300W PAR 58 NSP, MFL, WFL Q500W PAR 58 NSP, MFL, WFL	6 3/4"	8 1/4"	13 1/4"

*Front of housing rotates for desired beam orientation.

TUNGSTEN HALOGEN AND PROJECTOR UNITS.

✓ L452 — Compact lampholder with parabolic reflector for uniform rectangular beam pattern.

✓ L454 — Heavy-duty, high intensity framing projector. Four adjustable shutters and a system of lenses permit the shaping of a light beam into virtually any four-sided figure.

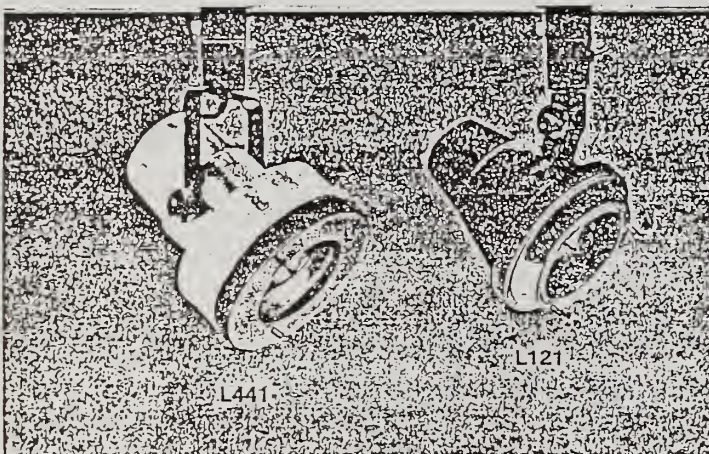


CAT. NO.	FINISH CODE	LAMPS	FIXTURE		O A HT
			LGTH	DIA	
L452	MB	250W Mini-can T4 Screw-base Tungsten Halogen	4 1/4"	7 1/4"	10 1/2"
L454	P	200W PAR 48/3 NSP Side Prong	8"	6 3/4"	12 1/4"

LOW-VOLTAGE PINSPOT*

L441 — "Continental-Style" display lamp holder with integral low-voltage transformer. Accommodates "L200 Series" color filters and L272 Louver.

L121 — Heavy-duty housing. Integral transformer.



CAT. NO.	FINISH CODE	LAMPS	FIXTURE		O A HT
			LGTH	DIA	
L441	AL	30W 6V Pinspot (No. 4535) 25W PAR 46	8 1/4"	7"	12 1/4"
L121	P or MB	Same as above	7 3/4"	6 3/4"	12 1/4"

*Front of housing rotates for desired beam orientation.

ORDER FOR SERVICE OR WORK

See Dept. Instruction No. 430

CONTRACTOR below is hereby ordered to furnish
Service or work under terms specified:Emmy Lou Packard3350 - 18th StreetSan Francisco, Calif. 94110

Controller's No. _____

Department's No. MY 79Date February 18, 1975

SEND INVOICE IN TRIPLICATE

TO CONTRACTING DEPARTMENT

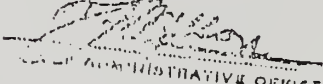
BUREAU OF BUILDING PERMITS
2523 ARMY STREET
SAN FRANCISCO, CALIFORNIA 94111**Restoration of Damaged Murals
Coit Tower****\$5,000.00**

The activity described herein is authorized by the City of San Francisco from an
environmental impact report is hereby adopted by
the City Planning Commission on April 1, 1975. /a

CONTRACT CERTIFICATE

GENERAL INFORMATION: PROJECT NAME: RESTORATION OF DAMAGED MURALS
AT COIT TOWER, SAN FRANCISCO, CALIFORNIA
CITY OF SAN FRANCISCO, CALIFORNIA
THIS IS TO CERTIFY THAT THE WORK DESCRIBED HEREIN IS
OF THE APPROPRIATION NO. 4.442.799.000.000

NONDISCRIMINATION: THE CONTRACTOR SHALL COMPLY WITH ALL
PROVISIONS OF THE CITY OF SAN FRANCISCO, CALIFORNIA
GRANTED HEREIN AND TO THE EXTENT OF THE CITY OF SAN FRANCISCO
OF THIS PROJECT AS DESCRIBED HEREIN.

Account Y-48631**APPROVED**

ADMINISTRATIVE OFFICER

RESOLUTION OR ORDER DATE	NUMBER	APPROPRIATION NO.	ACCOUNT NO.	O E	ENCUMBRANCE AMT.	
2/7/75	100,688	4.442.799.000.000	1400	799	\$ 5,000.00	
Department Head <u>S. M. IATARIAN, Director of Public Works</u> BY <u>L. P. Fong, Chief Accountant</u> Contracting Department _____						For Controller's Certification <u>John C. Fancee</u> THE AMOUNT OF THIS CERTIFICATION IS NOT TO BE EXCEEDED UNLESS CERTIFICATION OF THE ADDITIONAL AMOUNT IS FIRST SECURED.

MAR 20 1975

DEPARTMENT OF PUBLIC WORKS

INTER-BUREAU MEMO

TO: Director and
Head Accountant

THROUGH: Assistant Director M. & O.

FROM: Superintendent
Bureau of Building Repair

DATE: January 15, 1975

SUBJECT: Service Order for
Professional Services
Mural Restoration

Emmy Lou Packard has been recommended by the S. F. Art Commission as a muralist capable of effecting repairs to murals such as required for those at Coit Tower. Mrs. Packard has been contacted and has indicated that her services would be available. We know of no other person capable of duplicating the methods, colors and technique required to make indistinguishable repairs to these valued art works.

Therefore, please issue the appropriate service order for the professional services of Emmy Lou Packard, 3350- 18th Street, San Francisco, California 94110 for restoration of damaged murals at Coit Tower, according to this budget item:

Mural Restoration - Coit Tower

Appropriation No. 4.417.214.651.000

Index 651, Sheet 23, Line 3

Bureau of Bldg. Repair Account Y-48631

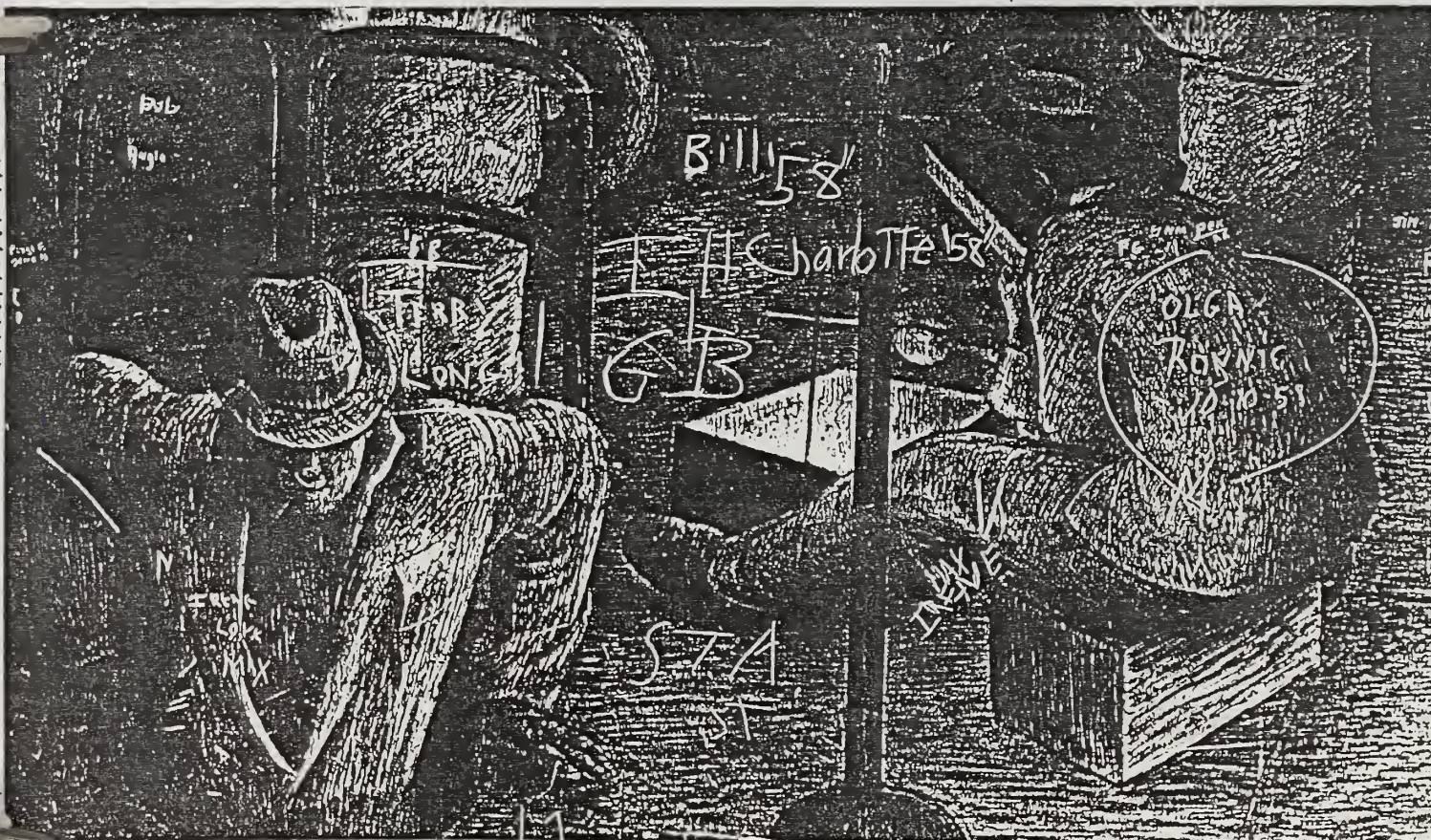
Superintendent
J. Rutherford

NM:os

Extensive damage had to be repaired at the top of the stairway in 1960-62 (on the mural by Lucien Labaudt). Plastering was done by John Wong (according to Dorothy Cravath's daughter). All of these repairs were supervised by Henry Rusk.

Dorothy Puccinelli
Cravath retouching
Stackpole fresco.

Photographs of damage repaired by Dorothy Cravath in 19 60-62 (under supervision of restorer Henry Rusk)



Arnautoff fresco, 1960 (fragment of photo by Ruth Teiser & Catherine Harroun)

COMMISSION

LORIS DiGRAZIA
President

EUGENE L. FRIEND
Vice President

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C. R. JOHNSON

MRS. J EUGENE McATEER

LUCIEN A. SABELLA

MRS. KATHERINE COLZANI
Secretary

CITY AND COUNTY OF SAN FRANCISCO
JOSEPH L. ALIOTO, Mayor

Recreation and Park Department

McLAREN LODGE, GOLDEN GATE PARK
SAN FRANCISCO, CALIFORNIA 94117



October 22, 1975

JOHN J. SPRING
General Manager

Ms. Emmy Lou Packard
3350 - 18th St.
San Francisco, CA 94110

Dear Emmy Lou:

Please accept my thanks for the loan of your very imaginative brochure of the restoration of the Coit Tower murals. Various members of the staff have had an opportunity of reviewing it.

It is the Department's hope that funds can be obtained in the near future, probably from the Concession Fund, so that your efforts and those of the galaxy of W.P.A. artists may be viewed safely by the public. It is the Department's desire that this work can be accomplished prior to the centennial of Pioneer Park which should be observed in the spring of 1976.

Best personal regards,

Tom

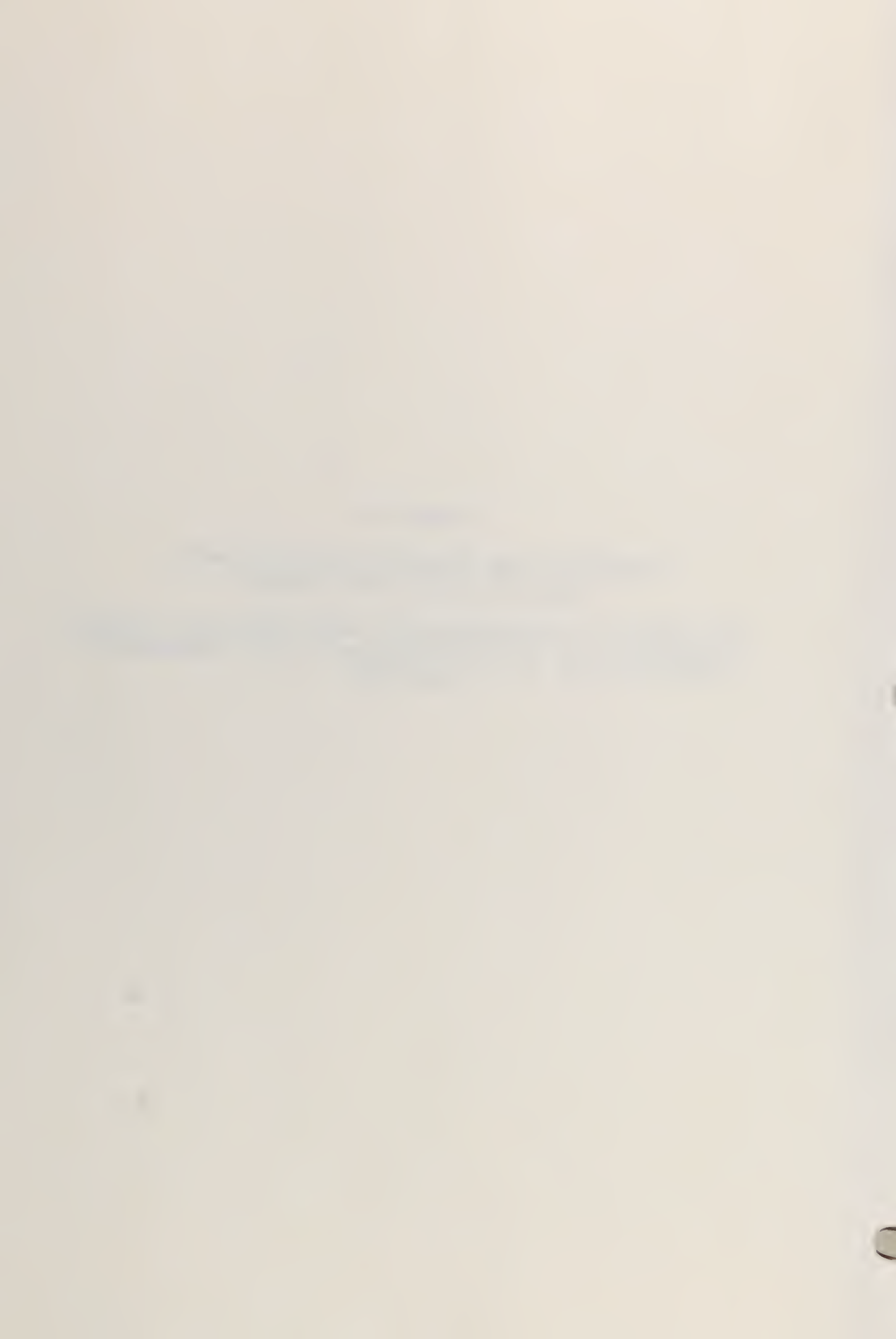
Thomas Malloy
Executive Assistant to
the General Manager

TM:fh

EXHIBIT B.

**REPORT ON THE FRESCOES OF COIT TOWER:
PILOT CONSERVATION STUDIES**

**PREPARED BY: ANNE ROSENTHAL AND CONSTANCE S. SILVER
PREPARED FOR: THE SAN FRANCISCO ARTS COMMISSION
JUNE 1987**



THE FRESCOES OF COIT TOWER:
PILOT CONSERVATION STUDIES

June 1 - 12, 1987

Prepared by:
Anne Rosenthal
and
Constance S. Silver
for the
San Francisco Arts Commission

TABLE OF CONTENTS

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Introduction	1
Documentation System	2
Structural Deterioration of Coit Tower	2
Problems of Conservation: Materials and Methods of Treatment	4
Plaster	4
Paint Layer	6
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Previous Restorations	8
Summary of Conservation Treatment Proposed	9
Priorities for Treatment	10
Public Access	10
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- Figures	
Photographs	



THE FRESCOES OF COIT TOWER:
PILOT CONSERVATION STUDIES

June 1 - 12, 1987

Not functional
Not for web page

INTRODUCTION

Coit Memorial Tower was constructed on Telegraph Hill in 1933 as a functional monument to San Francisco philanthropist Lillie Coit. Coit Tower also houses four water tanks that provide an even flow of water to neighboring areas.

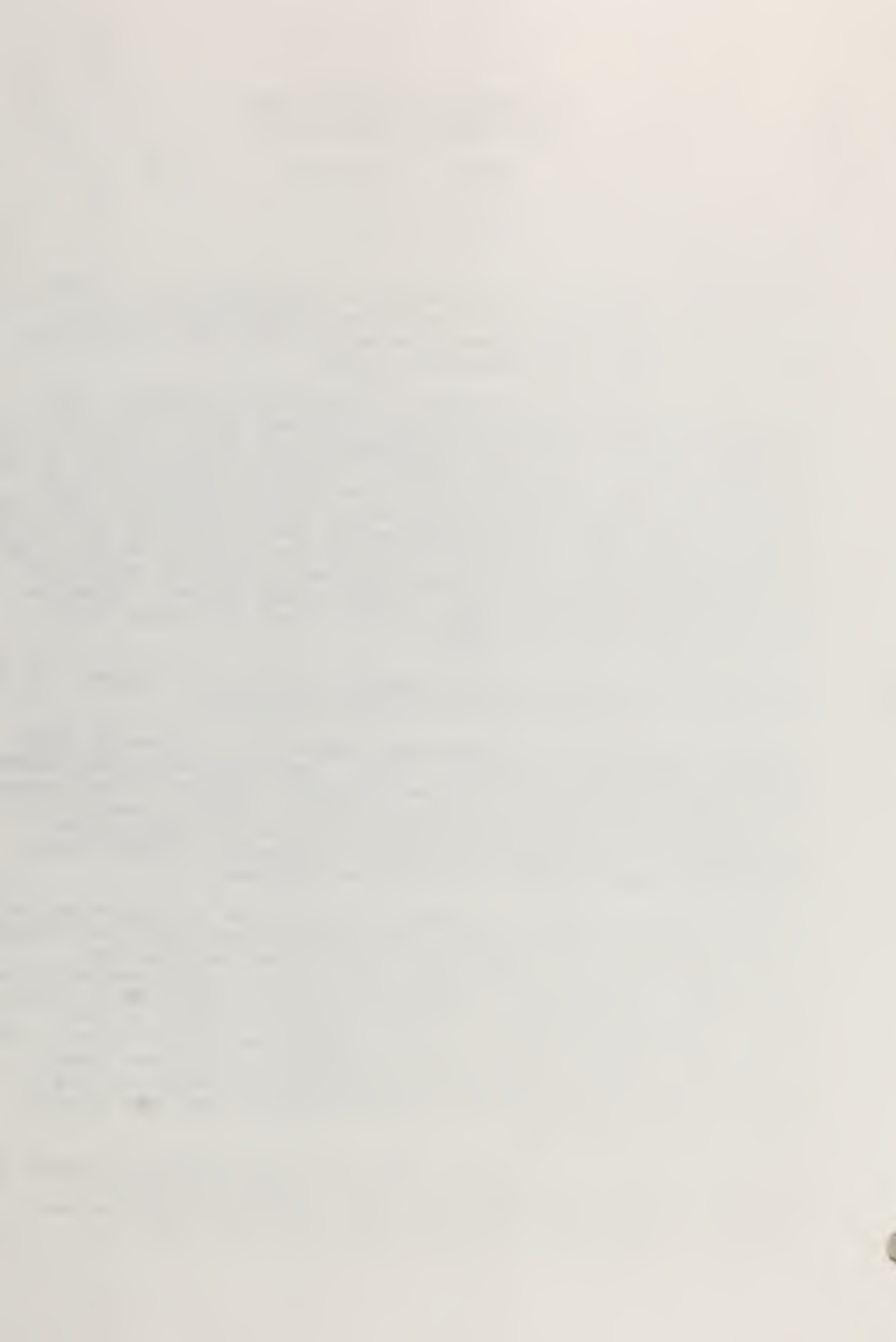
Coit Tower is an unusual example of reinforced concrete; the tower is a vertical spire that rises 180 feet from the top of Telegraph Hill. In 1934-35 the ground floor walls, the walls of the stair well to the second floor, and the corridor walls of the second floor were frescoed by San Francisco's leading artists; twenty-five artists participated and covered 3691 square feet of surface. The themes of the frescos are the history of and social life in California. Executed under the PWPA (Public Works of Art Project) these frescoes are among the most important cycles of mural paintings from the 1930s in the United States. Together the architecture of Coit Tower and its mural paintings are a unique ensemble from the 1930s.

Coit Tower is on the National Register of Historic Places. It is visited by an estimated 200,000 people each year.

The easily accessible frescoes have remained in generally good condition over the last fifty years. There has been some damage from normal wear and tear in the building, however. The frescoes have suffered from etched graffiti and ill advised insertion of fixtures directly into the pictorial surface of the plaster. Additionally, some aspects of early conservation efforts have exacerbated pre-existing conservation problems.

The most chronic and serious deterioration has been provoked by infiltration of water through the structure and into the plaster of the frescoes. Although this infiltration has remained localized, over the last twenty years it has caused weakening of the plaster, tenacious and unsightly stains, and loss of original paint. This deterioration of the frescoes arises from and reflects chronic weaknesses of the structure of Coit Tower. Coit Tower will undergo major structural repairs to address such problems as exfoliation of the reinforced concrete, rusting of interior metal reinforcement, and the chronic infiltration of water into the building.

It is appropriate, therefore, that the conservation treatment of the frescoes be coordinated with the program of structural repairs. This report describes the conservation studies and technical investigations carried out June 1-12, 1987, by



Anne Rosenthal and Constance S. Silver, preparatory to the development of a comprehensive conservation treatment of all of the mural paintings in Coit Tower.

From June 1 through 12, four major issues were addressed:

- 1) Development of a graphic documentation system to record the conditions of the frescoes prior to treatment and the treatments that will be implemented.

- 2) Examination of the relationship between the deterioration evident in the structure and those manifested by the frescoes.

- 3) Analyses of the principal problems of deterioration and presentation, preparatory to development of an appropriate course of conservation treatment.

- 4) Identification of issues of interior architectural conservation and historic preservation, especially as they relate to the presentation of the frescoes.

These four issues are discussed in the following sections of this report.

DOCUMENTATION SYSTEM

A clear documentation system is required to ensure control during the extended period of time required to treat an extensive cycle of mural paintings. Written and graphic reports of administered treatments are standard professional practice in art conservation.

The San Francisco Arts Commission has acquired black and white photographs and colored slides of all the frescoes, taken in 1987. Cracks and efflorescence of salts were recorded on mylar overlay sheets to delineate present conditions of the walls preparatory to the structural repairs of the building.

From June 1-12, measured drawings were made of the elevations of all the ground floor walls that are frescoed. Line drawings of the frescoes will be inserted onto the elevations. These drawings will ultimately be used to record graphically conditions and conservation treatments. Figure 1 is a model for this documentation system.

STRUCTURAL DETERIORATION OF COIT TOWER

It is generally axiomatic that the deterioration of mural paintings reflects the deterioration of the supporting architectural structure. This general rule is evident in Coit Tower, revealed by a brief examination of the frescoes and structure.

Figure two shows a plan of the configuration of the tower block and roof of the ground floor. The flat roof abuts the tower block directly above the frescoes. This roof appears to act as a terminus for the entire drainage of the tower. The center of the

observation deck contains a down drain which appears to run internally through the walls until it exits at various points in the walls and roof of the ground floor. Figure 3 shows a typical elevation.

A clear plan of the drainage system of Coit Tower is not immediately available, and in fact may not exist. Similarly, plans of the mechanical systems -- plumbing and electric -- are not accessible and, again, may well have been lost over the years: the current contractors for the repair of Coit Tower do not have, nor have they ever seen, the original or later plans of the mechanical systems.

A brief examination of the ground floor roof suggests that plumbing, electrical and heating conduits, the occupation of an apartment at this level, and various possible changes in the original drainage system, may also contribute to infiltration of water in proximity to the frescoes (Photographs 1,2,3). For example, on the second floor landing, localized infiltration into the fresco and efflorescence of salts are visible (Photograph 4). This is above the ground floor roof level. Another example was sited during the June 1-12 investigations: a serious leak occurred in the ceiling of a utility room on the east side of the ground floor directly behind and abutting a frescoed wall (Photograph 5; Figure 4). The water was dripping through a crack in the cement slab of the ceiling.

While all of these features could conceivably contribute to the problem of infiltration of water, it is evident that infiltration has been chronic and localized for many decades. Figure 4 and Photographs 6-27 show the locations of infiltration of water, and deterioration of architectural surfaces in proximity to the frescoes. It is interesting to note that the water problems are concentrated on the west (weather) side, and that the deterioration of the frescoes occurs almost exclusively in proximity to failures in the structure. However, heaters and cameras inserted through the roof may also act as conduits for infiltration.

Recent studies by the City of San Francisco and Interactive Resources, Inc., have identified failures in the ground floor roof as the principal source of infiltration of water. Indeed, the pattern of deterioration of the frescoes does suggest entrance of water at the junctures of the roof and tower block and the roof and exterior walls.

With the exception of possible areas near windows, there is no evidence of condensation on the frescoes.

A program of roof repair has been proposed. Its objectives will be implementation of seals at all junctures, and creation of an impermeable layer over the original concrete slab. It seems likely that these interventions will arrest most of the infiltration. However, the possible contribution of pipes, conduits and recent installations of heaters and cameras to the

problems of infiltration has not been analyzed. To effect roof repairs, the current roofing system must be removed down to the original concrete block. This operation will almost certainly present the only opportunity to examine and correct other possible sources of infiltration.

Examination of mechanical systems located in proximity to the frescoes may well add time and expenses to the planned project of roof repair. Another additional expense should be anticipated for the presence of a conservator while the roof is being removed: the vibrations to the structure could crack the frescoes, and the removal of roofing materials must be carefully monitored.

Infiltration has also been a chronic problem at the small windows. A shatter-proof exterior storm window may well resolve the problems of this localized infiltration and vandalism.

A system to determine the efficacy of the structural repairs needs to be articulated. At the very least the obvious areas of chronic infiltration must be monitored over a period of twelve months following conclusion of the roof repairs. A professional firm should develop the system for accurate monitoring. Interactive Resources, Inc., a firm of structural engineers that has already studied Coit Tower, should be queried.

PROBLEMS OF CONSERVATION: MATERIALS AND METHODS OF TREATMENT

Conservation problems were identified in the plaster, paint layer, and surface accretions. There are also unusual problems provoked by earlier restorations.

PLASTER

The plaster upon which the paintings exist was applied to the wall in two layers, as traditionally found in true fresco technique. In Coit Tower, the first layer, the arriccio, is light beige and contains some fibrous filler. The second layer, the intonaco, which is the support for the paint, is remarkably well prepared and applied. It is characterized by a very fine grain, compact and smooth surface and an intensely white tonality. Samples were collected for the purpose of analysis of chemical constituents and particle size distribution. This information should provide insights into the working methods of the artisans, as well as facilitate the preparation of compatible materials to fill lacunae in the plaster in final stages of the conservation treatment.

Present Condition

The most serious damage has been caused by localized infiltration of water that has resulted in the deposition of soluble and insoluble salts, friable plaster, poor bond between the intonaco and pigment, and brown stains. The plaster has also suffered

losses from etched graffiti, impact, abrasion and ill-advised alterations. Samples were taken of soluble and insoluble salts and the staining material from the roof.

Technical Investigations, June 1-12

Objective

To examine in depth each area of deteriorated plaster in order to ascertain condition and appropriate materials and methods for conservation treatments.

Investigative Methods

Removal of salts by brushing, and application of distilled water through Japanese tissue and on cotton swabs. This procedure was carried out for four reasons: salts masked the condition of the plaster; salts are hygroscopic and subject the plaster and paint to continuing stress; salts interfere with technical investigations; and salts veil the affected areas, making it difficult to determine the efficacy of structural repairs to prevent infiltration.

Results

Soluble salts were extracted and loose pigment was pressed back into plane on the intonaco. The actual condition of the water damaged areas was clarified. It is now possible to understand where original paint has been lost, or become very weakened, and the extent of tenacious staining.

Stains

As previously described, the brown stains appear to be composed largely of soluble organic material leached from the roof and ceiling. A small hole was drilled in a lacuna. It was observed that the stains permeate the entire thickness of the intonaco. This condition strongly indicates that complete removal of stains may not be possible because repeated applications of poulticing material would be required. Repeated contact with the plaster can lead to its weakening.

It was observed that the stains respond differentially to poulticing materials. Japanese tissue, paper pulp, and Japanese paper covered with kaolin were utilized with distilled water, aqueous solutions of ammonium hydroxide, bicarbonate of ammonia, bicarbonate of ammonia and bicarbonate of soda, and EDTA. The stains did not respond to hydrocarbon solvents.

In general, the stains proved very tenacious where they have permeated the plaster and remained fixed through many wetting cycles. Partially successful results were achieved in areas where the stains have been drawn to the surface and become bonded to soluble and insoluble salts; these stains were removed by

dissolving the salts with the combined bicarbonate of ammonia and soda. Those areas which appear to have been stained recently responded very well to poulticing with distilled water, ammoniated water, and the bicarbonate of ammonia and soda (Photographs 28,29).

Consolidation

As will be discussed in the following sections on previous restorations, applications of consolidants can exacerbate conservation problems. For example, resin based consolidants can discolor the surface and seal in salts and stains.

Very comprehensive study has been carried out over the last 15 years to develop inorganic consolidants for stone, plaster, and mural paintings. The Wacker ethyl silicates have received extensive examination in the field, with good results. A small pilot application was made to a very weakened area of intonaco and highly deteriorated pigment, about five inches by three inches (Photographs 7-8). This area will be continuously monitored to determine the efficacy of the consolidant within the environment of Coit Tower.

PAINT LAYER

The paint layer is remarkable for the skill in execution and stable condition. Indeed, deterioration has occurred only in response to infiltration of water, impact, etching, and abrasion. The paintings are classic true fresco with little or no a secco details and additions. Some chalky passages may indicate the presence of a secco details in lime water or perhaps a calcium caseinate medium; these areas manifest resistance to water.

Present Condition

The following conditions were recorded: losses from holes; abrasion; etched graffiti; scratches; partial loss of paint from running water in the form of streaks through the sills and from infiltration in the ceiling; unstable, powdery and flaking paint from infiltration of water through the plaster; and stains in the paint layer.

Investigative Methods:

Unstable paint was pressed back into plane on the plaster with applications of distilled water, as previously described.

Stains in the paint layer derive from those in the plaster, and responded similar to methods for removal.

Losses in the paint layer -- holes, abrasion, etched graffiti and streaks from running water -- will require visual reintegration, following standard procedures for fresco paintings. Holes will be filled with a lime-based filler and reintegrated primarily

with a water color medium or other stable and reversible paint medium.

Reattachment of Unstable Paint

Unstable paint is found in conjunction with water damaged and unstable plaster. As previously described, the use of consolidants and fixatives is a complex issue. The pilot use of the inorganic Wacker ethyl silicate was employed as both a consolidant for the plaster and a fixative for the unstable paint. There are precedents for the use of ethyl silicate as a fixative because it is compatible with porous, inorganic materials, and causes little or no changes in optical qualities.

SURFACE ACCRETIONS

Seven general categories of accretions are present on the surface of the frescoes. These include: ambient grime - deposition of air-borne dust; greasy deposits - largely the result of hand contact with the walls; soluble salts - appearing as fluffy white deposits in proximity to infiltration of water; insoluble salts - appearing as a white milky veil over the pigments in proximity to infiltration of water; stains in insoluble salts - appearing as an opaque brownish veil over the pigments in proximity to infiltration of water; paint drips - residues, droplets and streaks of ceiling paint on the surface of the paintings; and materials from previous restorations - as described in the following section of this report.

Investigative Methods

Ambient Grime: Ambient grime was partially removed by brushing the surface. Ammoniated water is also effective.

Greasy Deposits: Greasy deposits have also fixed ambient dirt. These areas responded to applications of ammonium bicarbonate and sodium bicarbonate through Japanese tissue (Photograph 30).

Soluble Salts: These salts were removed by poulticing with distilled water through Japanese tissue.

Insoluble Salts: Insoluble salts were largely removed by poulticing with ammonium bicarbonate and sodium bicarbonate through Japanese tissue.

Stains in Insoluble Salts: The stained insoluble salts could be removed by poulticing with ammonium bicarbonate and sodium bicarbonate. However, where the stains also remained trapped below in the pigment and intonaco, removal was very difficult.

Paint Drips: The drips of architectural paint appear to be strongly adhered to the surface of the frescoes. Only the largest drips are visually disturbing. These can be treated by retouching; attempts at removal will most likely result in localized abrasion.

PREVIOUS RESTORATIONS

Previous restorations of the murals in Coit Tower have taken place. The first was undertaken in 1960. The second was completed in 1975 (see enclosed report of the 1975 treatment). There appears to be no written record on the extent of the work or the procedures used in 1960.

The 1975 treatments were in response to visually disturbing loss of paint from infiltration of water, graffiti and impact. It also seems likely that efforts were made to stabilize flaking paint and enhance original paint obfuscated by a veil of insoluble salts.

The following types of restoration were identified: compositional reconstruction -- repainting of designs on original intonaco or fills with Liquitex acrylic emulsion paints; application of an acrylic emulsion medium as a fixative for unstable paint and plaster, and as a saturating medium to compensate for the opacity caused by a veil of insoluble salts; and color compensation in etched and abraded areas.

Problems

The acrylic emulsion paints and medium appear to have crosslinked; that is, they have become insoluble. They have also darkened. Most significantly, they have acted as an impermeable layer that has trapped salts below the surface, concentrated stains, and caused the expansion and movement of the evaporation surface. Photographs taken before and after the 1975 treatment, and during the current investigation, clearly illustrate these phenomena (Photographs 31, 32, 33). Before treatment in 1975, stains and salts extended above the heads of the small figures. Areas damaged by water and salts were treated with acrylic emulsion materials. By 1987 salts, stains and water damage had extended into the face and the torso following the borders of the 1975 restoration.

Stains are also trapped and concentrated by the acrylic emulsion. Attempts to poultice these stains were largely unsuccessful due to the interference of the plastic medium. Finally, the medium could not be dissolved. It was possible to swell the medium with hydrocarbon solvents followed by partial mechanical removal. Although the medium is technically insoluble, it has become deformed and unstable due to the mechanical action of salts and water.

A small area of the highly deformed acrylic medium was removed. The underlying intonaco was largely disintegrated by the concentration of water and soluble salts. No original paint remained (Photograph 34).

SUMMARY OF CONSERVATION TREATMENT PROPOSED

Conservative conservation treatments are desirable whenever possible. With this in mind, the following procedures are proposed to rectify damage and to preserve as much as possible the original qualities of the frescoes:

1. At Coit Tower a great percentage of the painted surface is in very good condition, and requires only dusting or light surface cleaning at this time.

2. Surfaces which have been damaged and soiled due to human traffic and abuse will require more extensive cleaning.

Disfiguring films of hand oils and other accretions will be removed from the main entry hall of the Tower and elsewhere.

3. Old retouchings and overpaints are very difficult to remove, and removal may present some hazard to adjacent original surfaces.

Therefore, areas which do not require extensive cleaning will retain these additions. Old retouchings which no longer match the original colors will be modified with additional inpainting as time allows.

Areas such as the entry hall, which will receive extensive cleaning, may require that old retouching and overpaint be removed. Wherever possible, however, it will be left in place if color matches remain true.

4. Stains will be removed, as possible, from water damaged areas.

5. Soluble and insoluble salts will be removed from the paintings to the degree determined safe to the paintings.

6. Original intonaco and paint will be consolidated, as possible, in water damaged areas.

7. Losses in original intonaco will be filled with a lime based filling material. Some areas previously patched may be removed and refilled to obtain a better finish. Non-original fixtures attached to the walls will be removed, and holes filled. Some consolidation of plaster is needed in these damaged areas.

8. Losses will be compensated by inpainting with water color, or another stable and reversible medium.

9. A barrier to prevent handling of the paintings and accidental damage has not yet been designed, and its efficacy is, therefore, unknown. The decision whether or not to apply a protective surface coating to the frescoes has consequently not been made. In any event, the application of a coating would take into account all aspects of reversibility and optical changes. Only the most vulnerable areas would be considered for such application.

PRIORITIES FOR TREATMENT

The follow is a list of areas to receive conservation treatment, in order of greatest need:

1. Areas damaged by water infiltration and efflorescence. These areas must be completely dry in order to effect satisfactory conservation treatments. A period of at least one year is needed to ascertain whether or not building repairs have been successful in halting water seepage.
2. Entry hall walls; greatly soiled, scratched, abraded.
3. Losses around windows, doors and fixtures which require stabilization of plaster and filling.
4. Other scattered losses, etched graffiti soil, and accretions found in moderate traffic areas throughout the first floor.
5. Oil on canvas murals in elevator lobby which are lightly soiled and water stained.
6. Second floor paintings, which have same problems as first floor, but to a lesser degree. This is a non-public space.
7. Spiral stairway leading to second floor; mechanical damages and soil. This is a non-public space.

** Please Note: Conservation treatments in other areas may begin prior to the one year period needed for drying and inspection of locations damaged by water infiltration.

PUBLIC ACCESS

In order to maintain security and safety, the murals must be closed off from public access during the course of conservation treatment.

This will require advance notice and the cooperation of City agencies to inform the public of the closure. In order to maintain public access to the observation tower and gift shop, barriers must be erected to re-channel the flow of traffic. Public restrooms may also have to be closed to maintain conservators' access to the entire hallway near the entrance, where much of the damage to the paintings is located.

The conservators must be permitted to leave work stations set up, and have access to storage on-site in order to expedite work. This equipment must be secured against public tampering.

Another factor which will greatly influence productivity is the ability of the conservators to come and go from the site without hindrance. This will require guaranteed legal parking stalls.

COST FACTORS/INCREASES

The length of time needed to complete work on this project is difficult to determine accurately. These preliminary investigations revealed that certain procedures will indeed be both difficult and time consuming. Time estimates written into the National Endowment for the Arts grant request may be insufficient to complete work on both upper and lower floors, considering that 20% of the total time allocated has already been expended on preliminary studies.

A minimum of 20% increase in cost must, therefore, be anticipated. The most effective way to maintain accurate accounts of the project will be to perform work in increments, dividing the work into manageable segments. A reasonable segment, for instance, may be the work on the north entry hallway, followed by the west, south, then east halls. At the completion of one segment, the others may be more accurately estimated. If a shortage in budget is anticipated, the work in non-public spaces, (which requires less comprehensive attention) may have to be postponed.

INTERIOR ARCHITECTURAL CONSERVATION

The mural paintings are the principal and outstanding component of the interior of Coit Tower. Because the architecture and frescoes are contemporaneous, it can be assumed that all aspects of the interior were planned and executed together with the objective of enhancing both the murals and the architecture as a unit.

Changes which have occurred over the years have been detrimental to the presentation and interpretation of this important historic interior. Six problems are immediately evident:

Ceiling

The ceiling has been painted an institutional and overly brilliant white, which competes with the frescoes and makes them appear dim and muted by comparison. Most importantly, however, the layers of impermeable paint on the ceiling trap water, concentrate stains, and force water, stains and salts to migrate to the nearest evaporation surface, the intonaco of the frescoes.

The correct historic finish must be determined for the ceiling. The present paint schemes in the stair well and second floor landing may provide some models (Photograph 35). It is imperative that all loose and water damaged paint of the ceiling

be removed as soon as possible, to permit evaporation of trapped water. Prior to this operation, the frescoes must be protected and tests carried out to determine if asbestos and/or lead-based paints are present.

Borders

The colored-plaster border around the frescoes appears altered. A pilot removal of surface accretions using distilled water through Japanese tissue revealed a deeper and richer tone, which seems to be more harmonious with the tonality of the frescoes. This richer color is more compatible with the glazed tiles, and more closely resembles the dark rose band on the ceiling on the second floor.

Doors, Moldings and Trims

The doors, moldings, and window trims should be returned to their original colors. A door with a wire-reinforced glass panel is in storage in an alcove in Coit Tower. It may be one of the original ground floor doors. Its provenance should be determined because, if original, it will serve as a model for original form and colors.

Ceiling Fixtures

The ceiling fixtures must also be addressed. The recently installed heaters and cameras must be removed because they are visually disturbing, and appear to promote the infiltration of water.

The light fixtures are original, however, discs in the ceiling may indicate that some fixtures have been removed. The original number of light fixtures should be determined. Lost fixtures should be replicated to restore the original symmetry of the interior.

Dropped Ceiling

The acoustical dropped ceiling of the elevator lobby should be removed. It is visually disturbing and makes inspection of the structure impossible. Drips are visible on two of the mural paintings, but the dropped ceiling masks the origin of the infiltration.

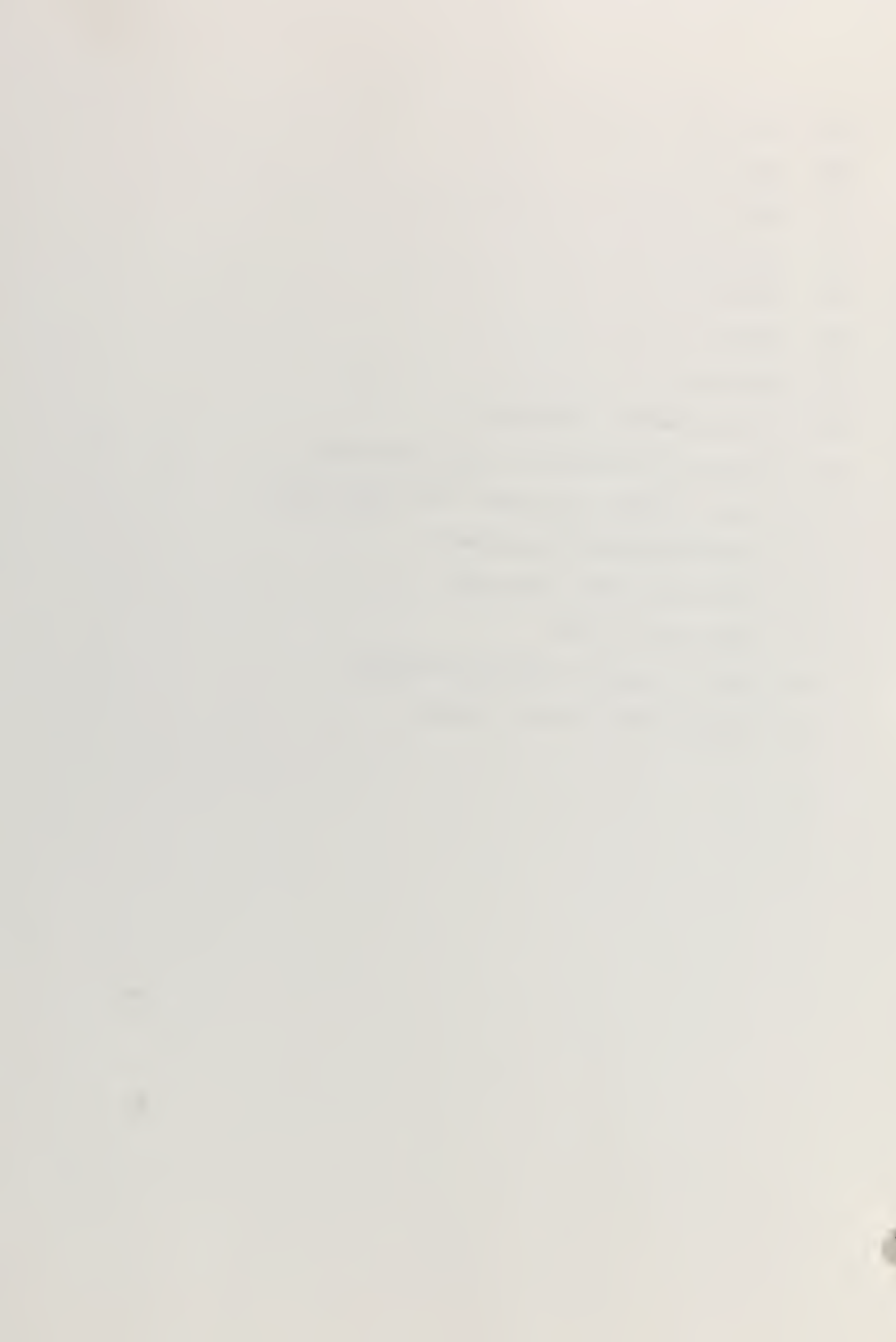
FIGURES

1. Documentation System: From
Conservation of Wall Paintings, P. Mora, L. Mora,
P. Philippot, Butterworths, London, 1984.
2. Plan View
Friends of Recreation and Parks
3. Typical Elevation
Interactive Resources, Inc.
4. Plan of Ground Floor and Water Damage
Interactive Resources, Inc.

PHOTOGRAPHS

- 1-3 Ground Floor Roof
4. First Floor Landing: water damage
5. Ceiling of Ground Floor: crack and leak through slab
6. Area A
7. Areas 1 and B
8. Area B
9. Area 2
10. Areas 3, C, and D
11. Areas 4 and E
12. Areas 4 and E
13. Area 5
14. Area 6
15. Areas 6 and F
16. Areas 7 and G
17. Areas 7, H and I
18. Areas 8, 9, 10 and J
19. Areas 8, 9, 10 and J
20. Area K

21. Areas 12, L and M
22. Area O
23. Area P
24. Area Q
25. Area R
26. Area S
27. Area 16
28. Stains before treatment
29. Removal of stains by simple poultice
30. Pilot removal of greasy and fixed grime
31. Area before 1975 treatment
32. Area after 1975 Treatment
33. Same area in 1987
34. Area of acrylic emulsion medium
35. Second Floor: paint scheme



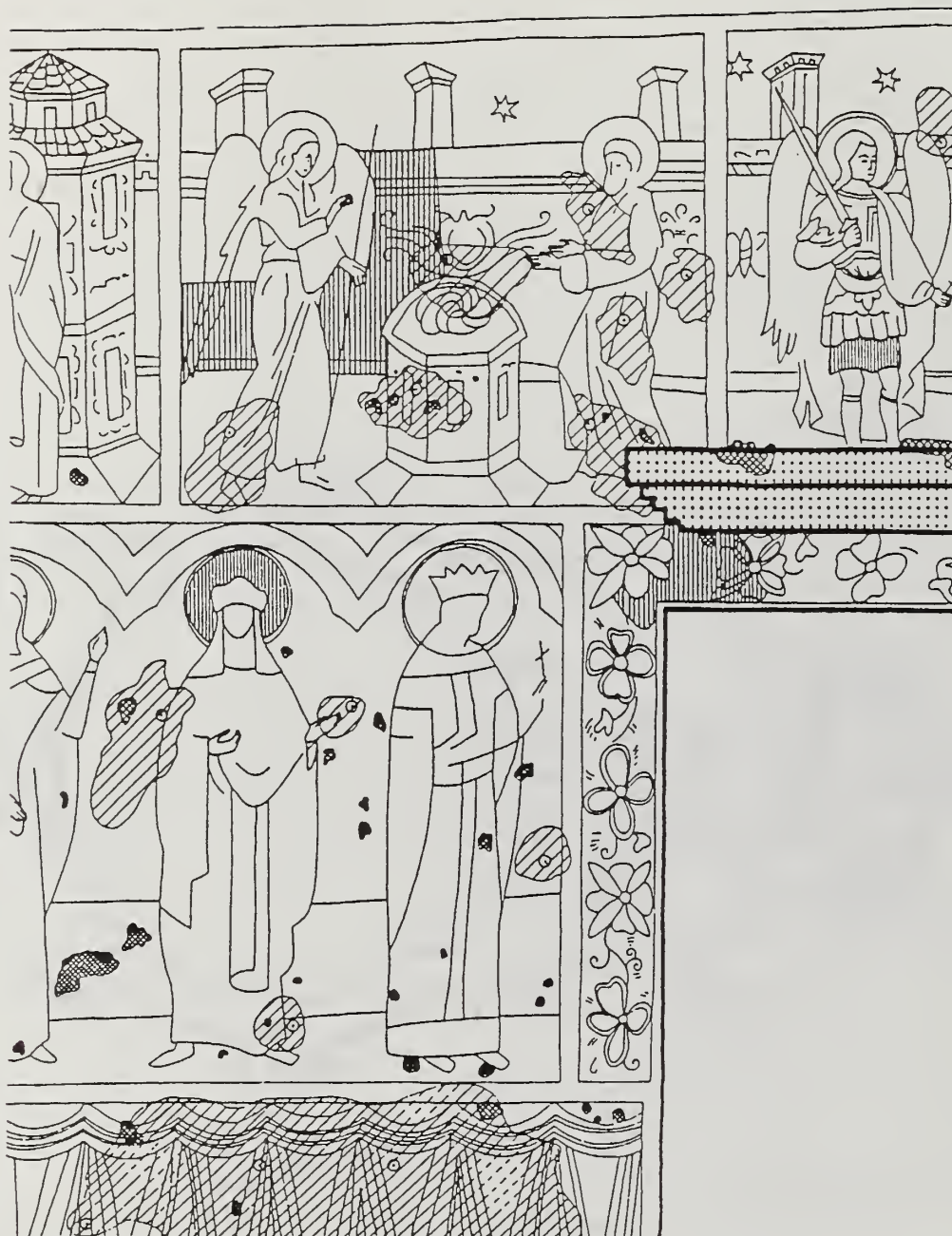
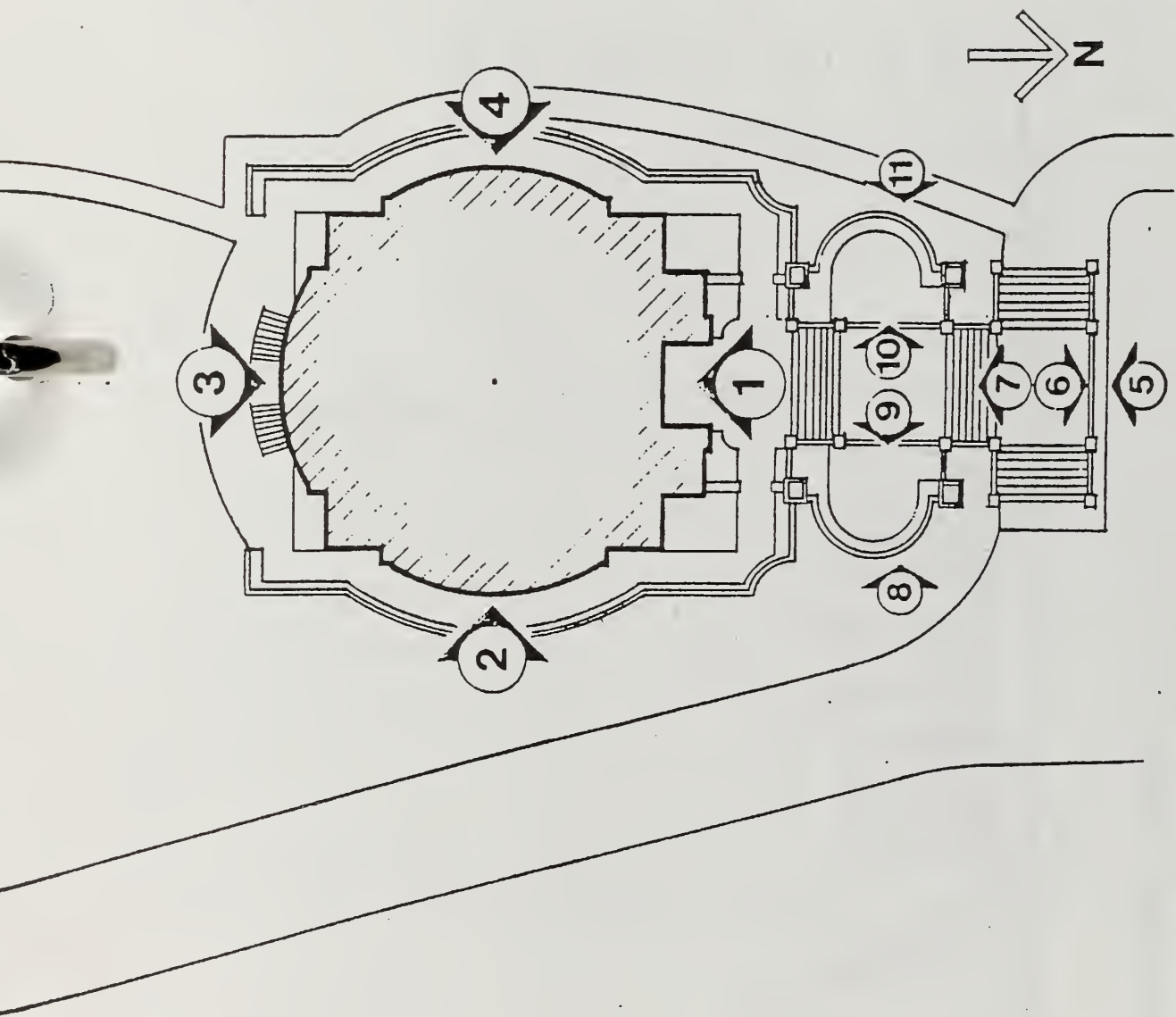


Figure 2.4 (a) and (b) Graphic documentation of the state of preservation of mural paintings. (After a scale drawing by the Bureau of National Cultural Heritage, Bucharest.)

Figure 1





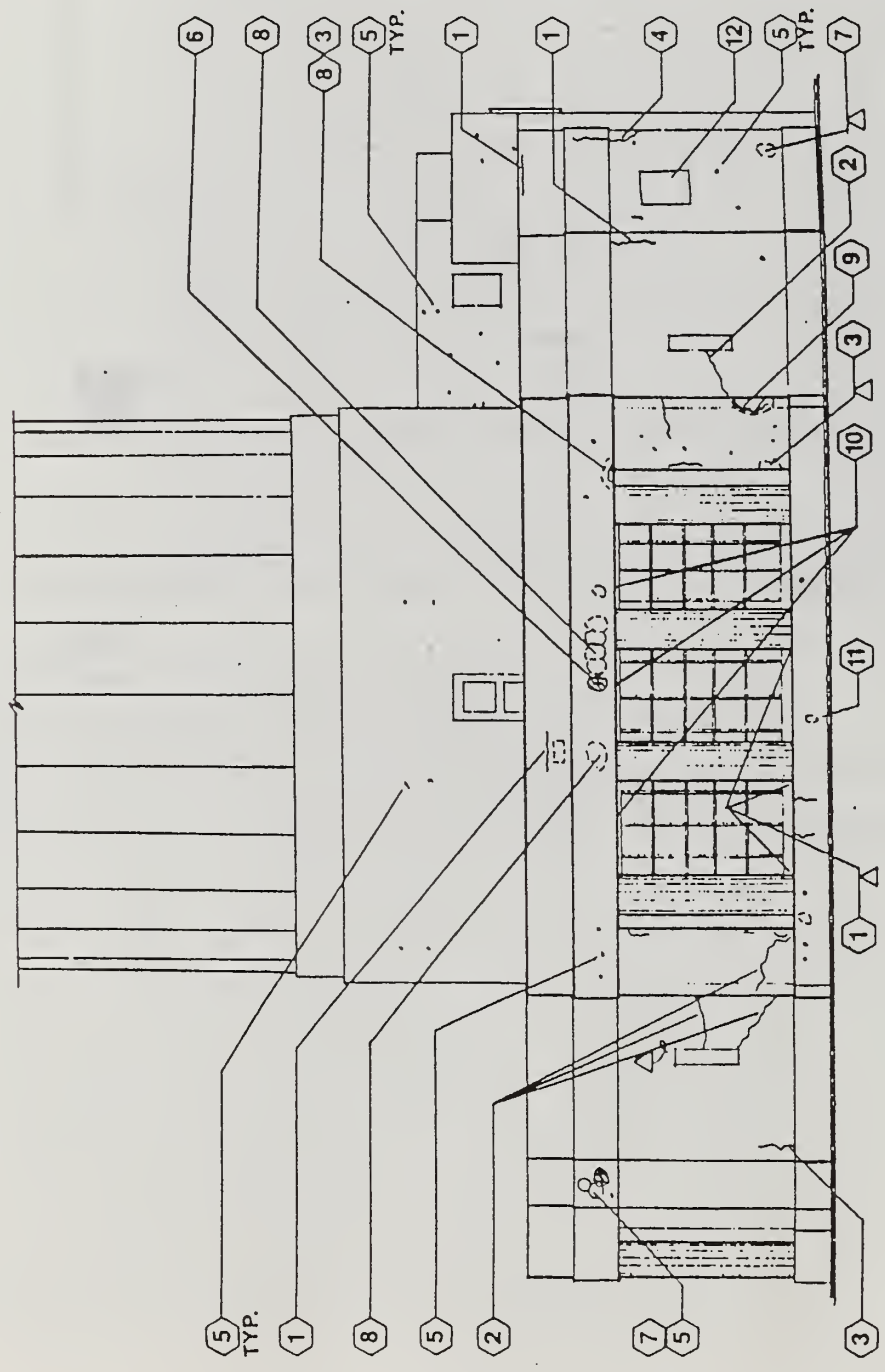
COIT TOWER - PLAN VIEW

Figure 2

BASE WALL DETEIORATION SURVEY TABLE
EAST ELEVATION

Item	Description	Quantity	Sect.-Photo ^a
1	Less than 1/32" wide crack, up to 4'-0" long, minor repair required.	44 Ft.	E-c
2	Less than 1/32" wide crack, 4'-0" or longer, minor repair required.	30 Ft.	E-b
3	Greater than 1/32" wide crack, up to 4'-0" long, major repair required.	10 Ft.	E-f
4	Greater than 1/32" wide crack, 4'-0" or longer, major repair required.	6 Ft.	E-g
5	1" to 4" diameter form tie spall, corroded reinforcement exposed, patched or unpatched.	37 Ea.	F-a
6	Unpatched spall 4" to 8" in diameter.	2 Ea.	G-a
7	Patched spall due to corroded reinforcement, 4" to 8" in diameter.	4 Ea.	G-e
8	Patched spall due to corroded reinforcement, 8" to 15" in diameter, on beam over columns.	7 Ea.	G-b
9	Patched spall due to corroded reinforcement, 8" to 24" in diameter.	N/A	G-g
10	Beam soffit cracks, discoloration and deterioration.	40 Ft. ²	G-c
11	Scaling and delamination of concrete surface coating.	Entire Surface	H-b
12	Cracking and water leakage at wall grate.	1 Ea.	E-h
13	Cracking and spalling around pipe.	N/A	G-d
14	Large spall area above first floor entry.	N/A	G-f
15	Horizontal patched crack in parapet	N/A	E-j
16	Vertical patched crack in second floor wall	N/A	E-j

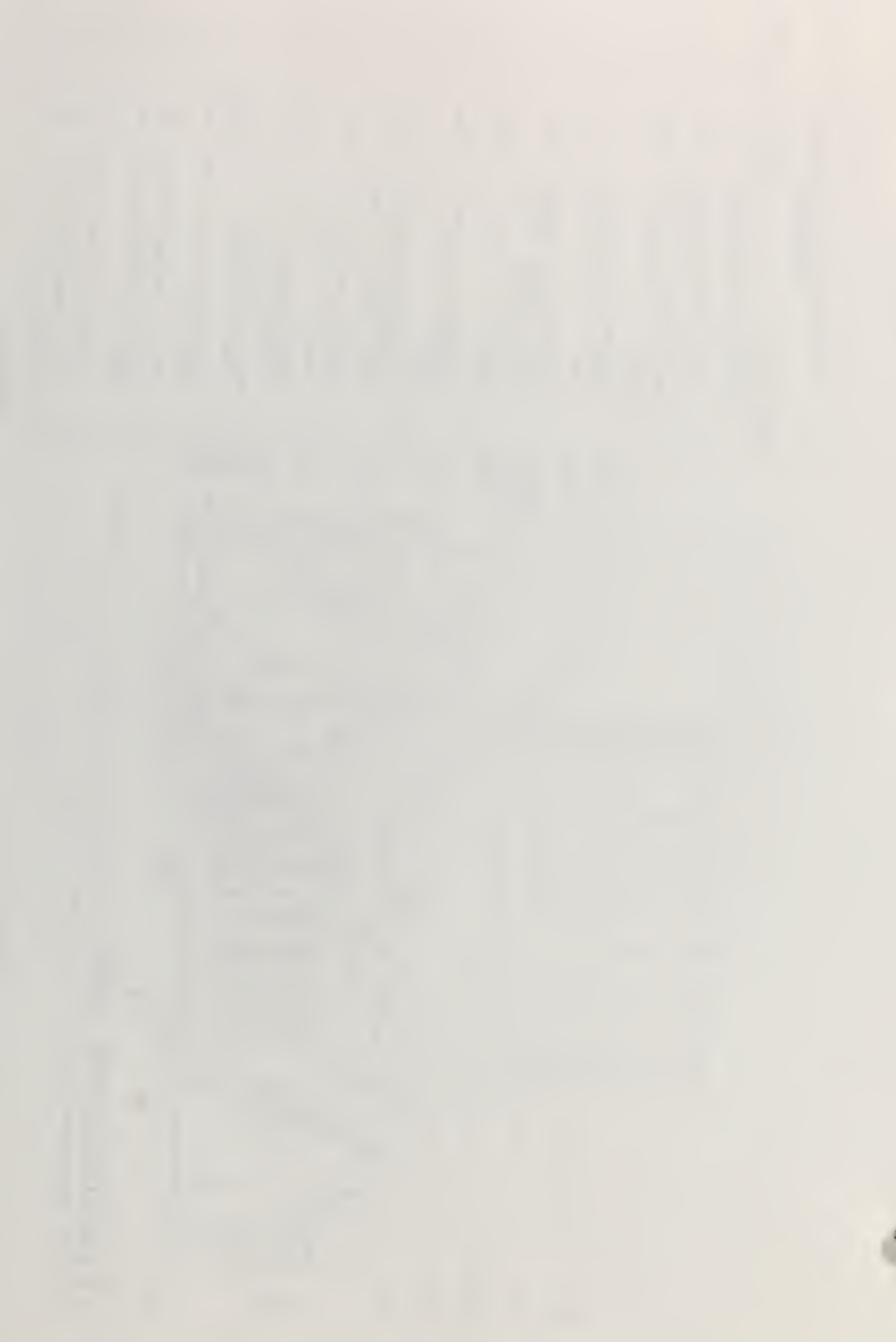
^a See Part III

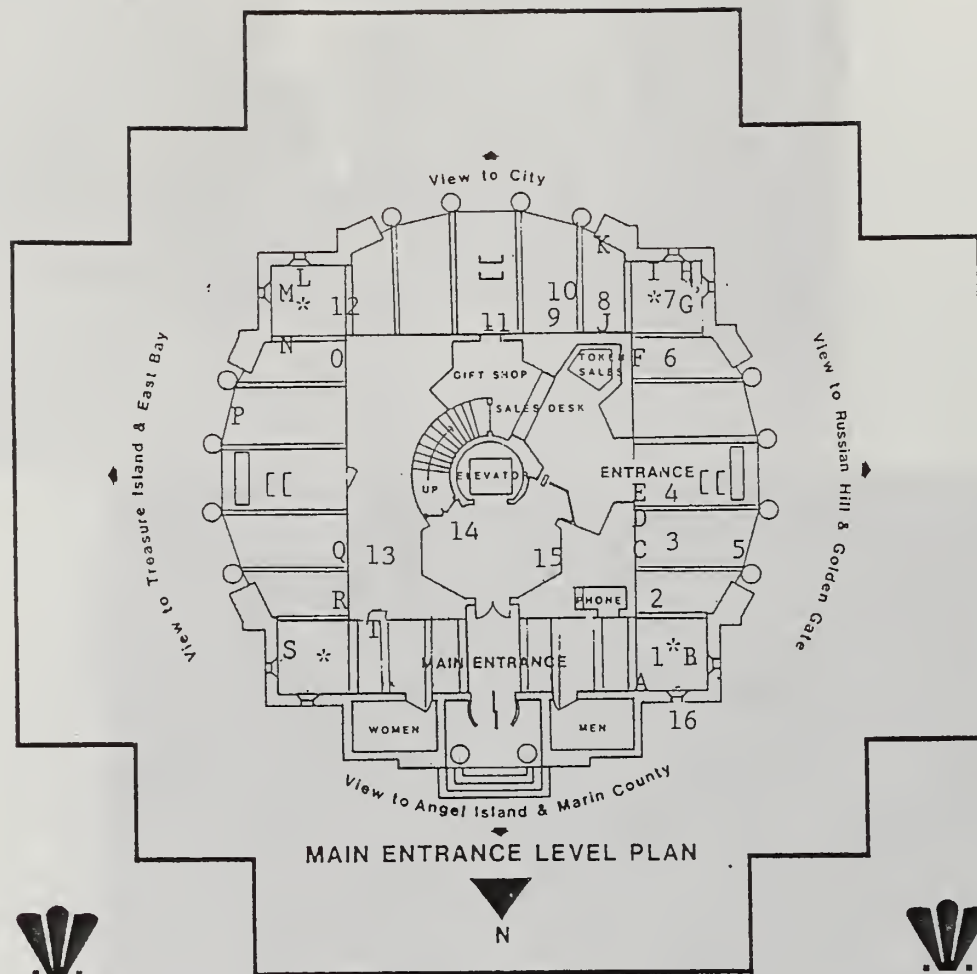


2 EAST ELEVATION - BASE

△ Photo referenced in Deterioration Survey Table 1s of this area.

Figure 3





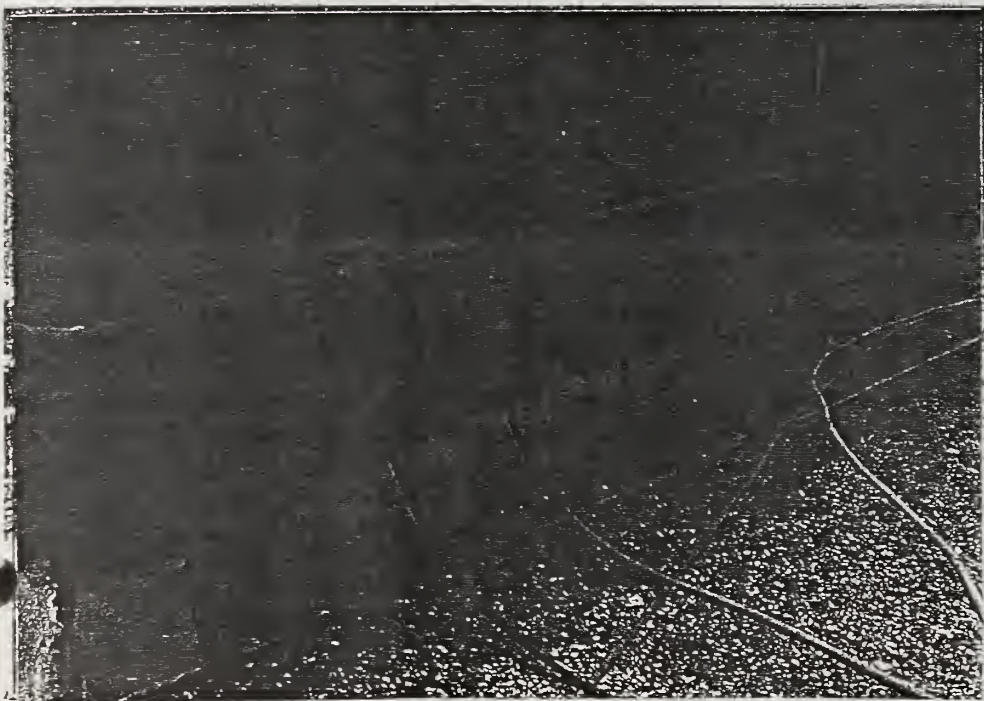
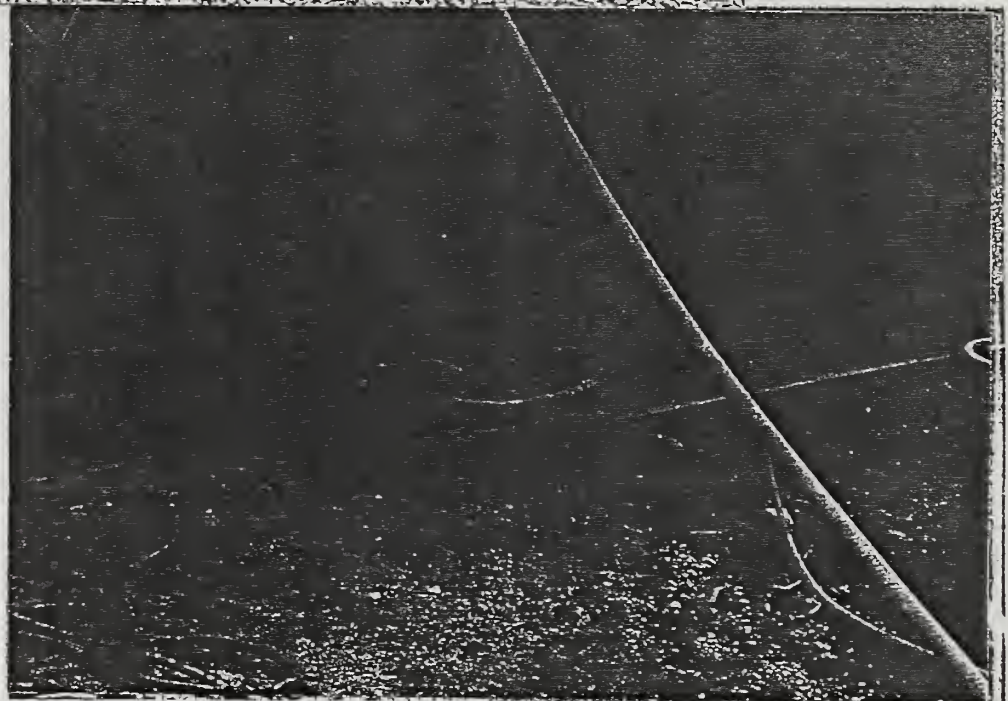
4. Coit Tower. Ground Floor Plan (Friends of Recreation and Parks).
Legend:

- 1-15 Infiltration of Water
- A-T Water-related Damage to the Frescoes
- [[Heaters Installed through the Roof and Ceiling
- * Cameras Installed through the Roof and Ceiling



1.

2.

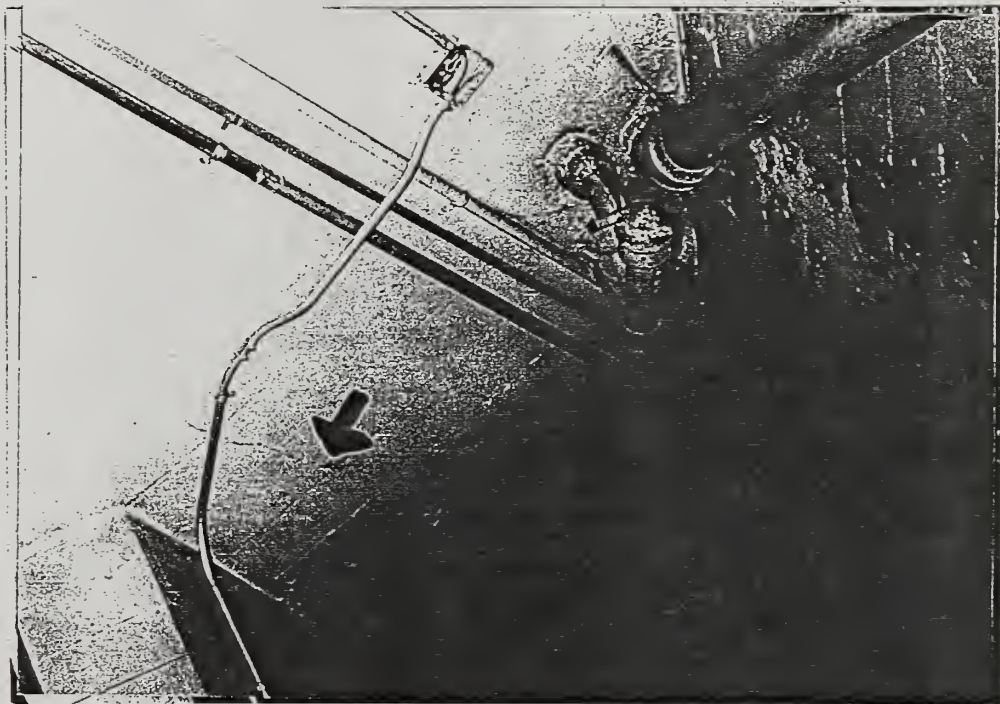


3.

Ground Floor Roof



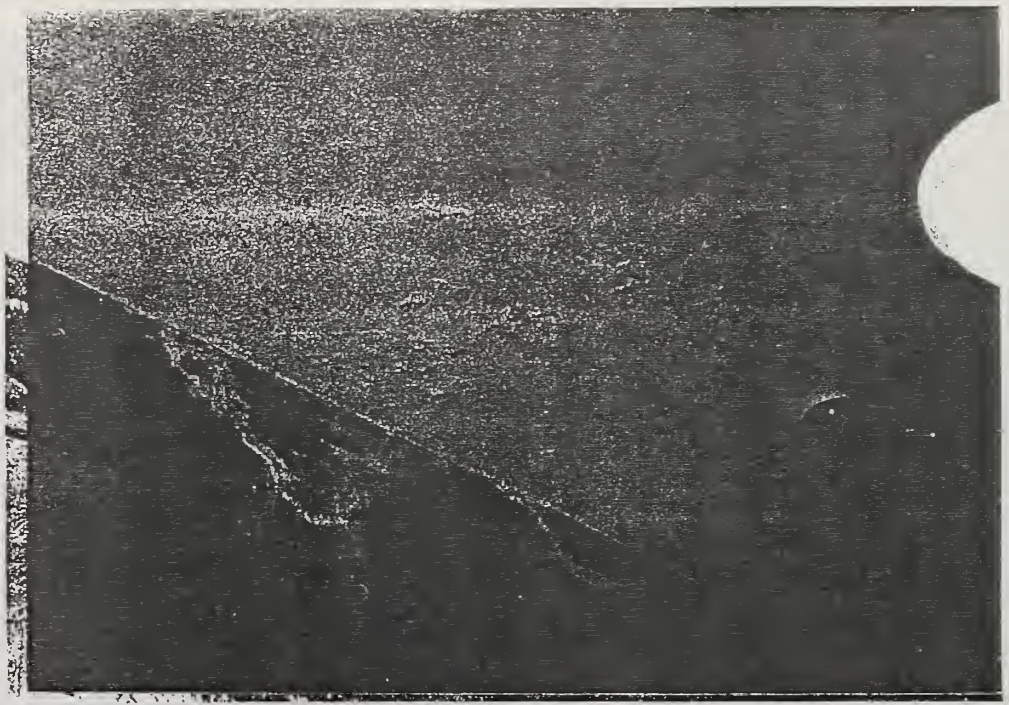
4. Second Floor landing. Water damage on ceiling and efflorescence of salts on the frescoes.



5. Ceiling of Ground Floor. During the second week of June, 1987. water dripped from a crack in the ceiling. Wall at right of photo supports frescoes.



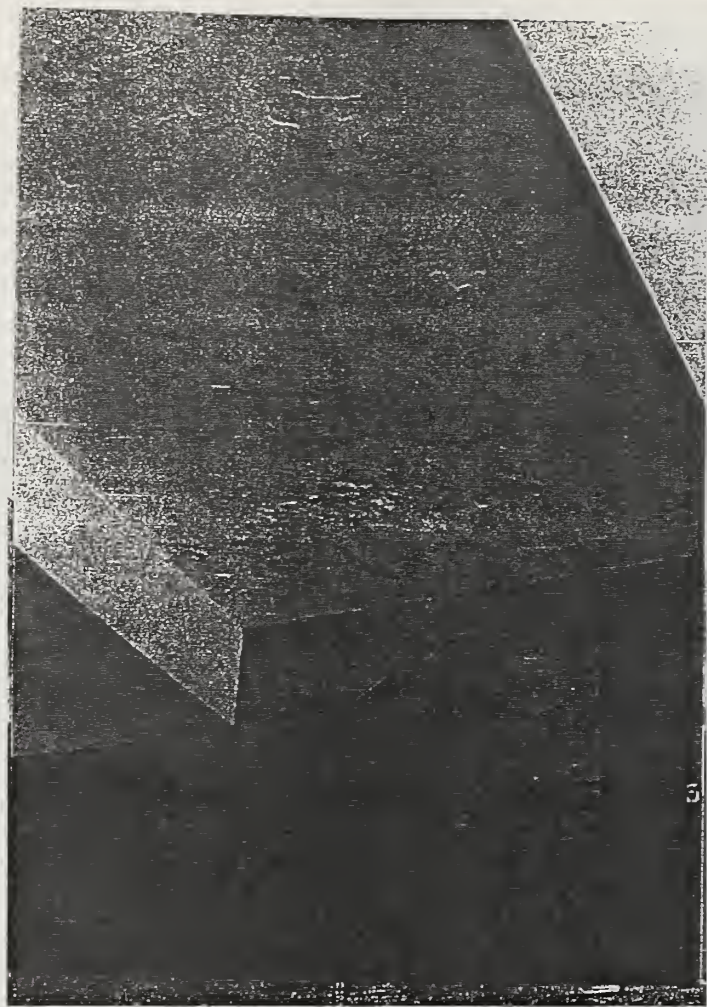
6. Area A



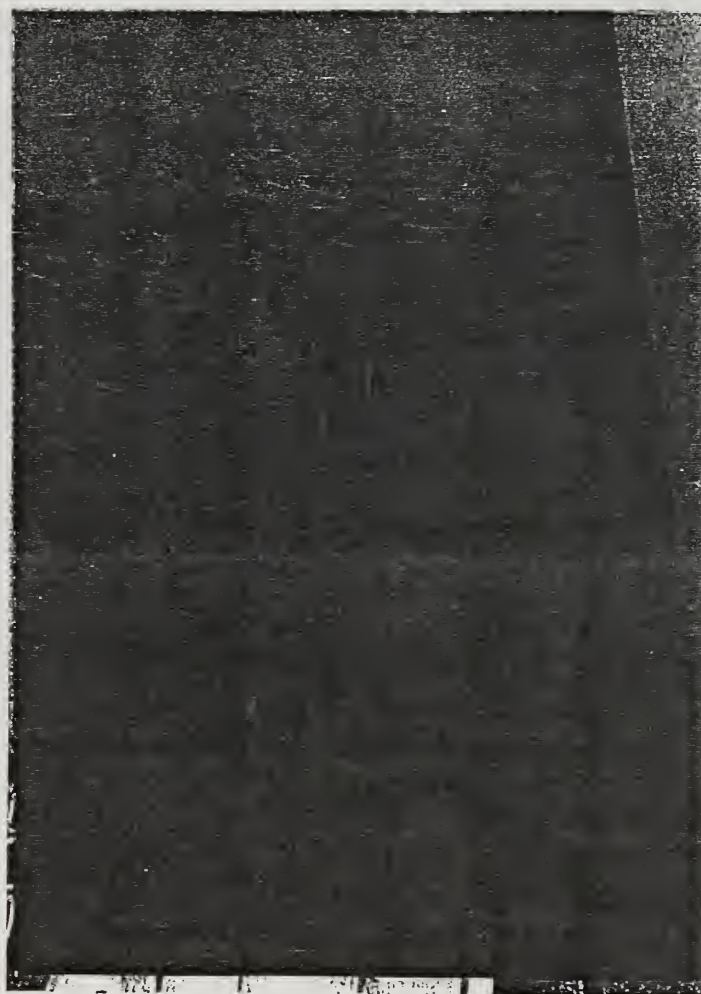
7. Areas 1 and B

8. Area B

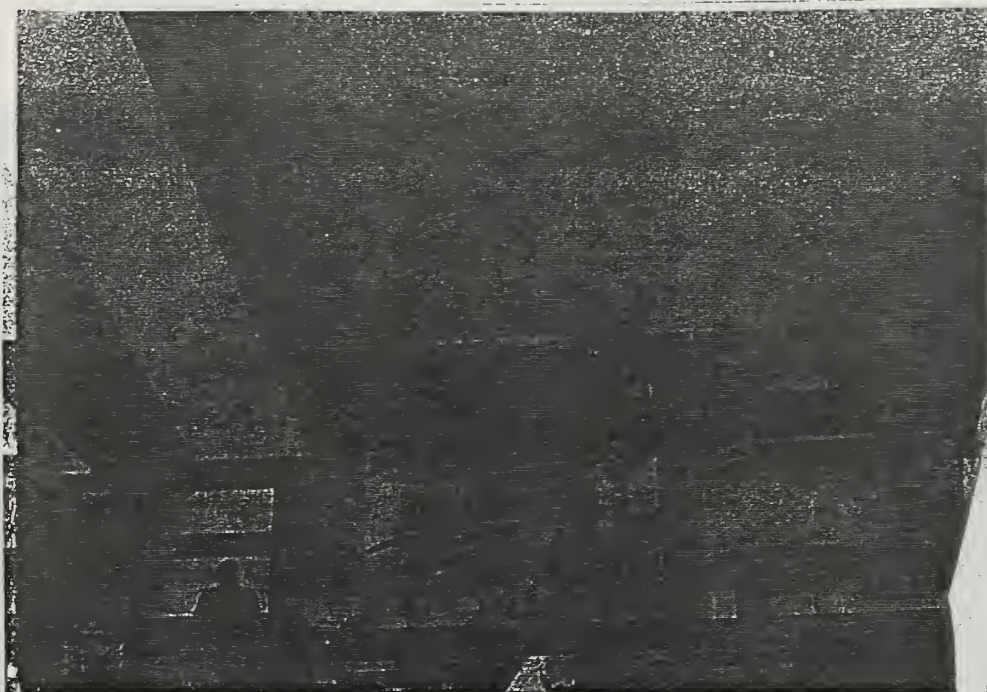




9. Area 2

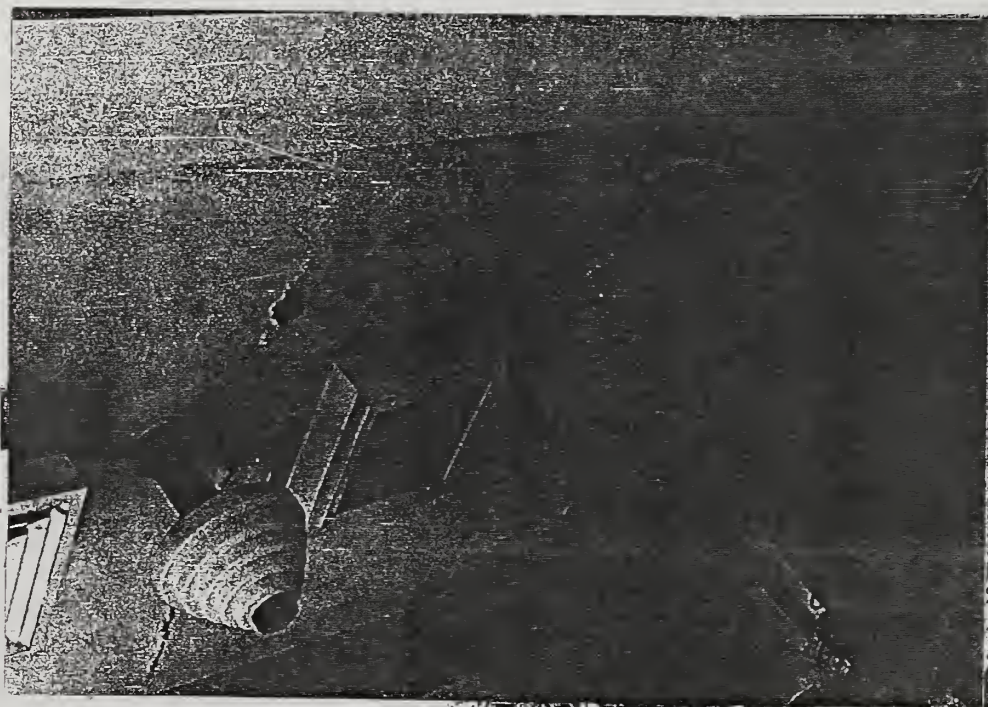


10 Areas 3, C and D



11. Areas 4 and E

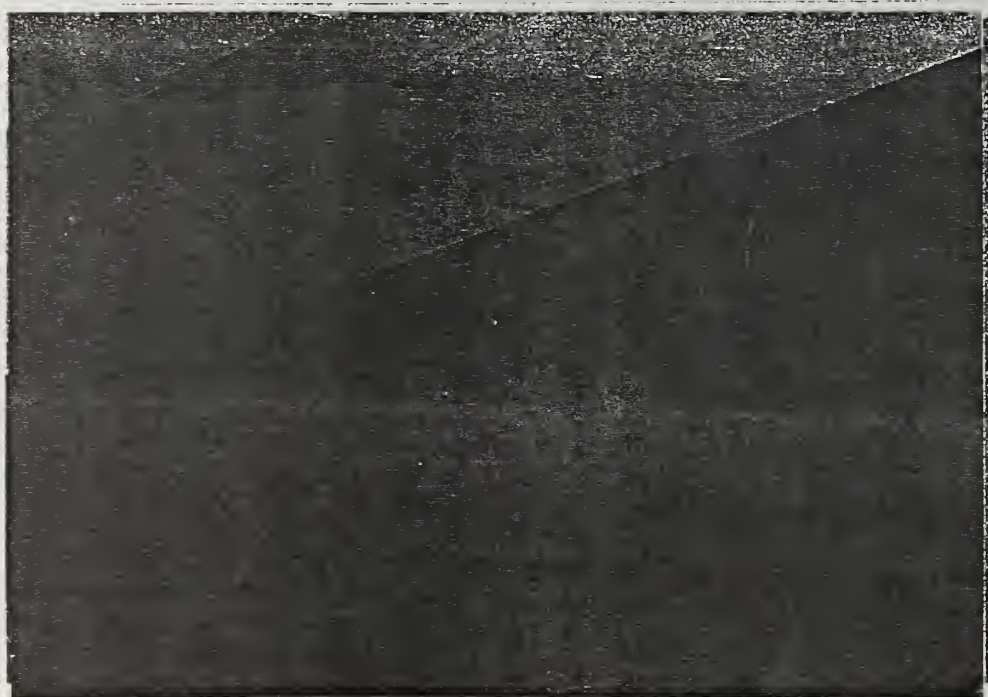
12. Areas 4 and E

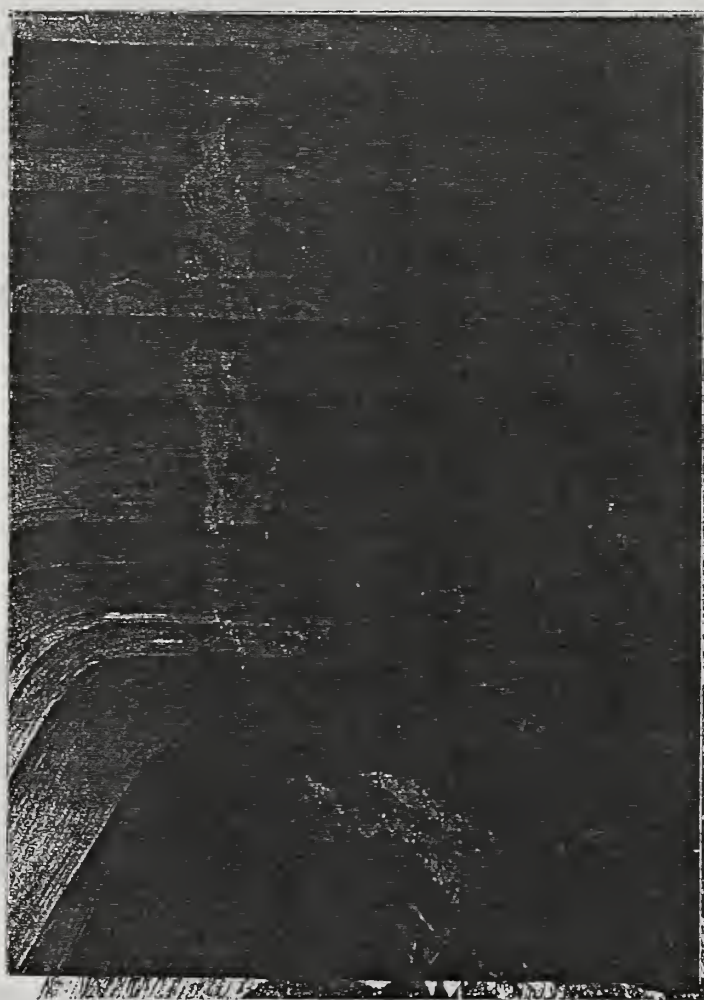




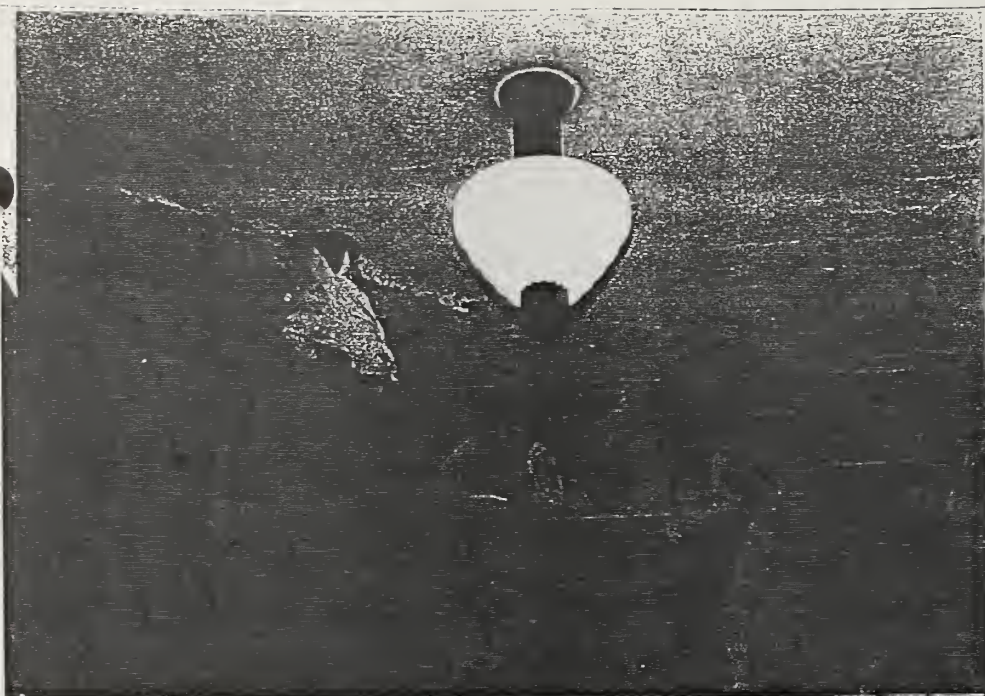
13. Area 5

14. Area 6



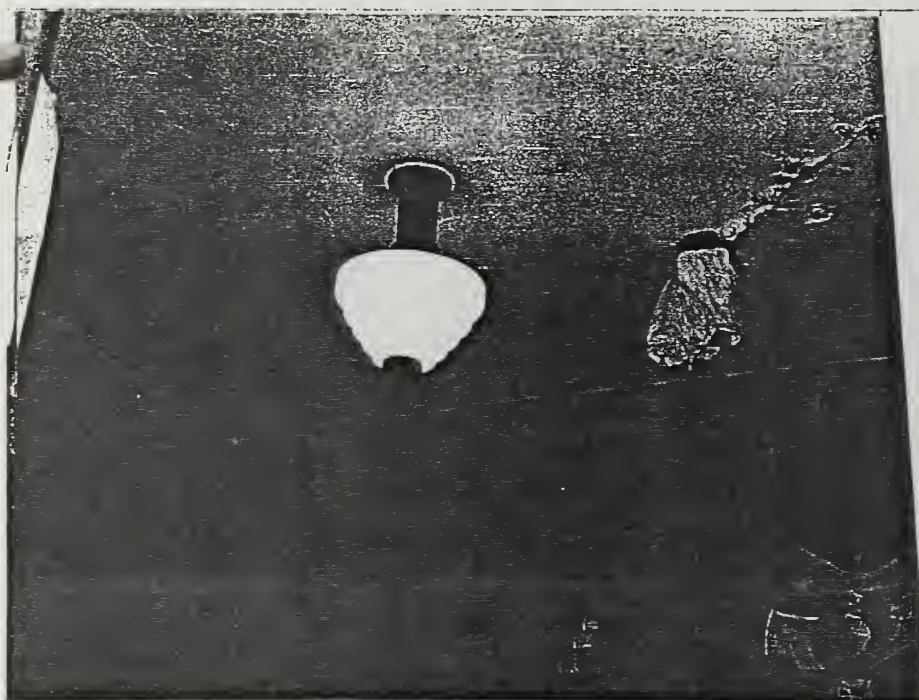


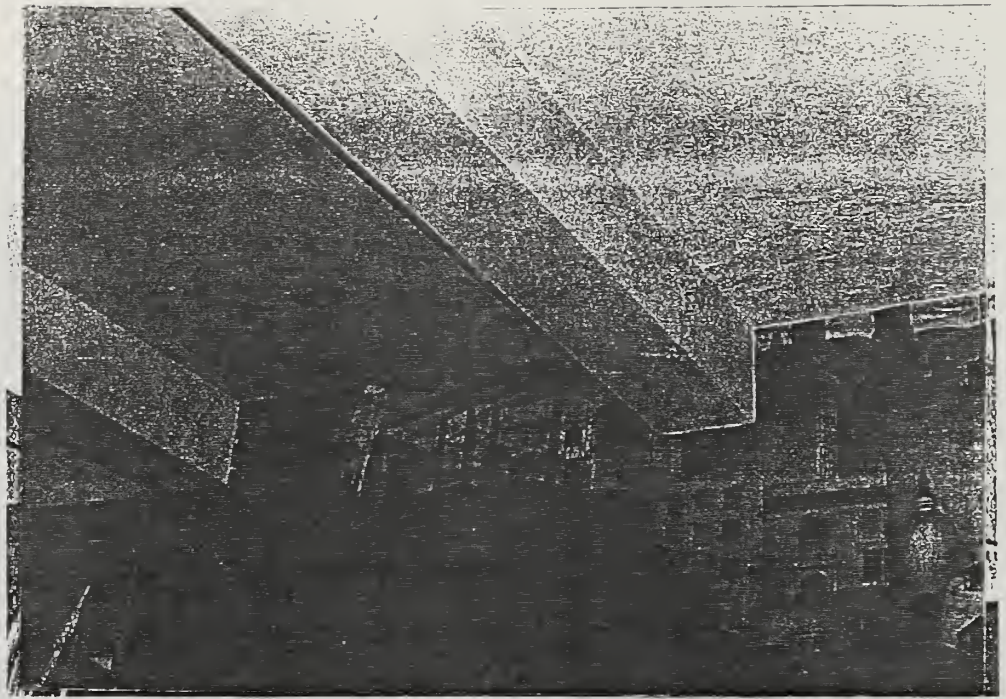
15. Area 6 and F



16. Areas 7 and G

17. Areas 7, H and I

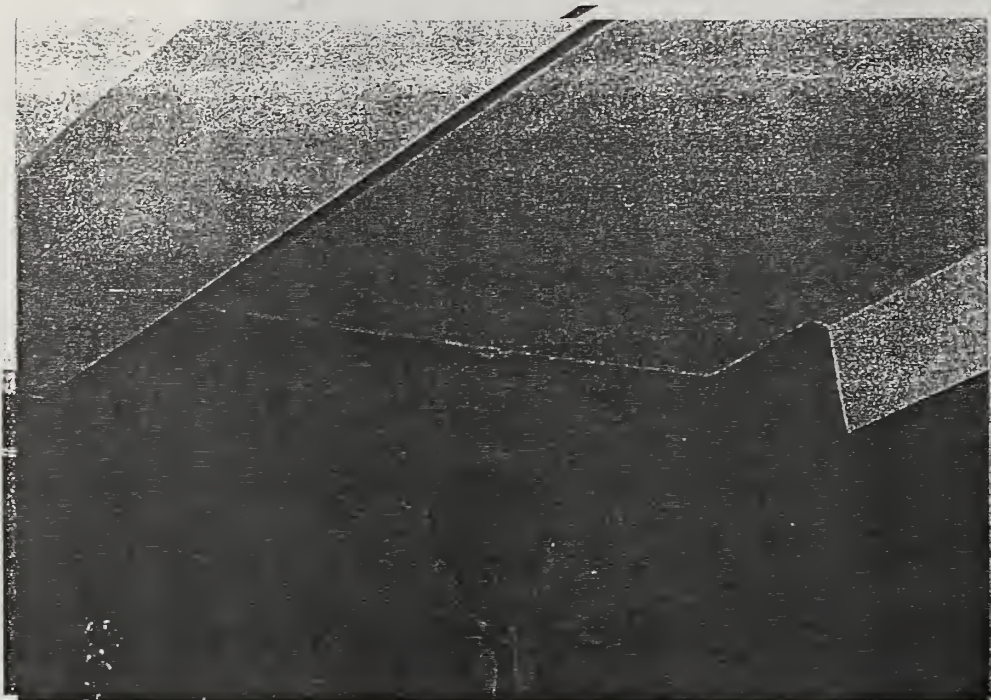




18. Areas 8, 9, 10 and J

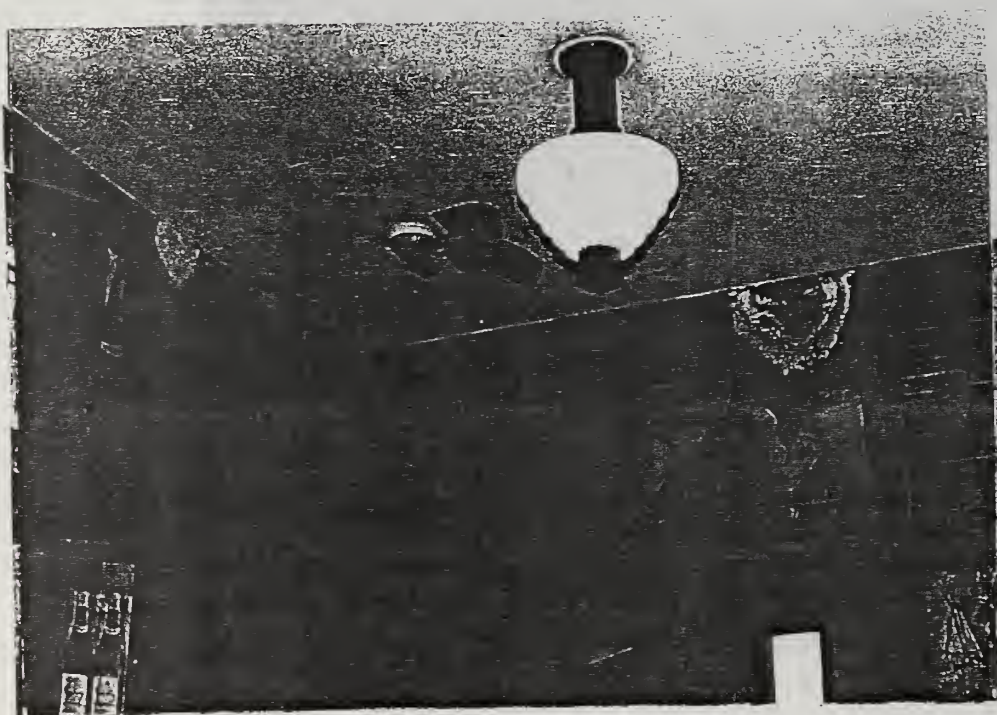
19. Areas 8, 9, 10 and J





20. Area K

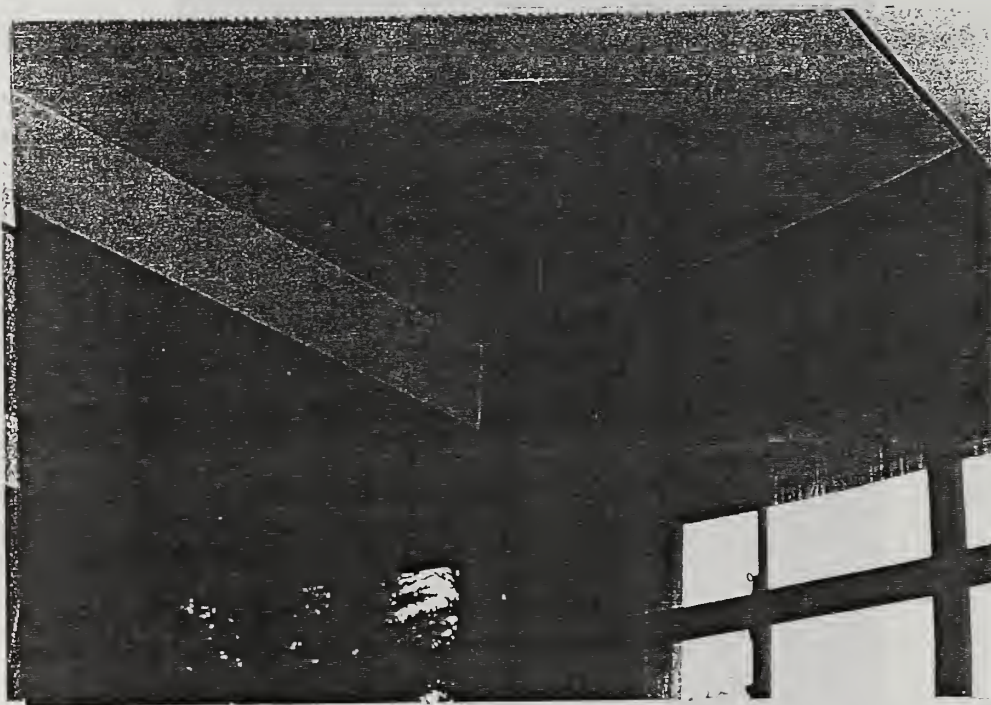
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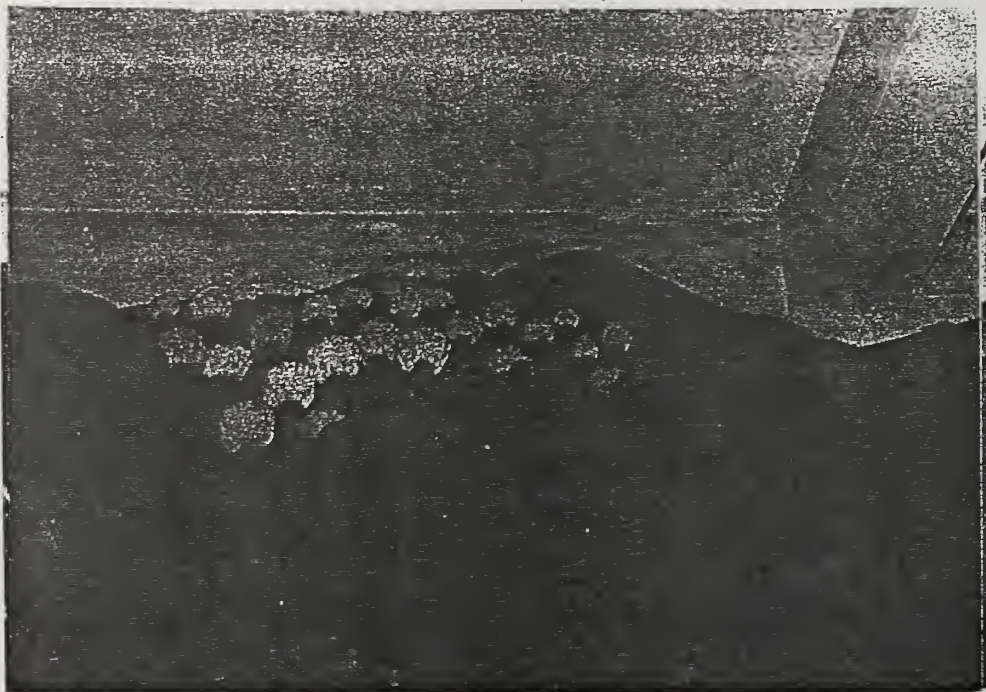




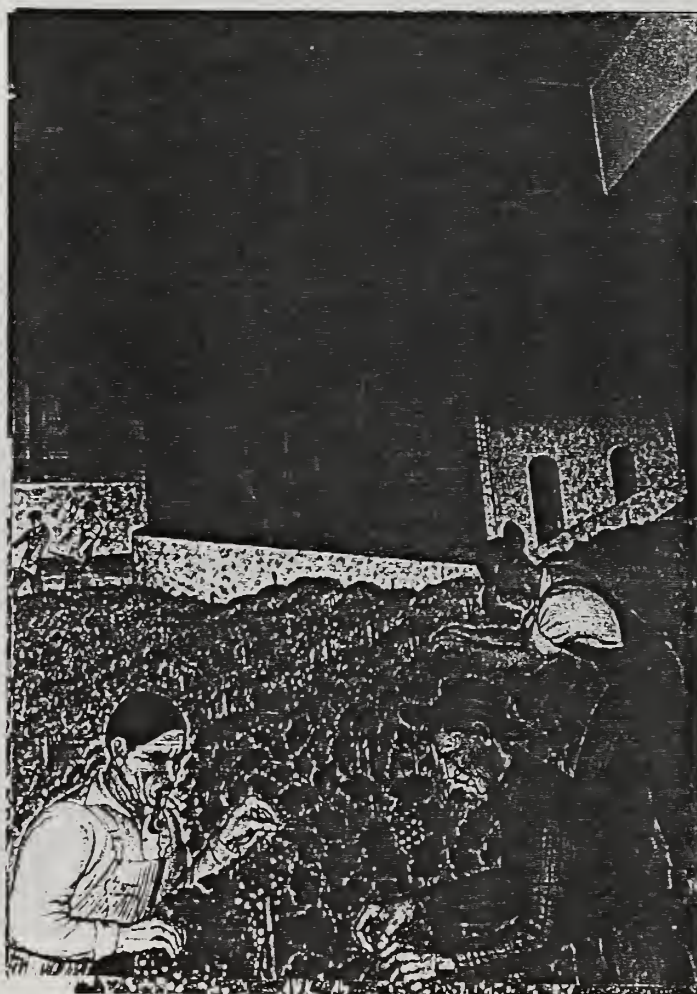
22. Area O

23. Area P

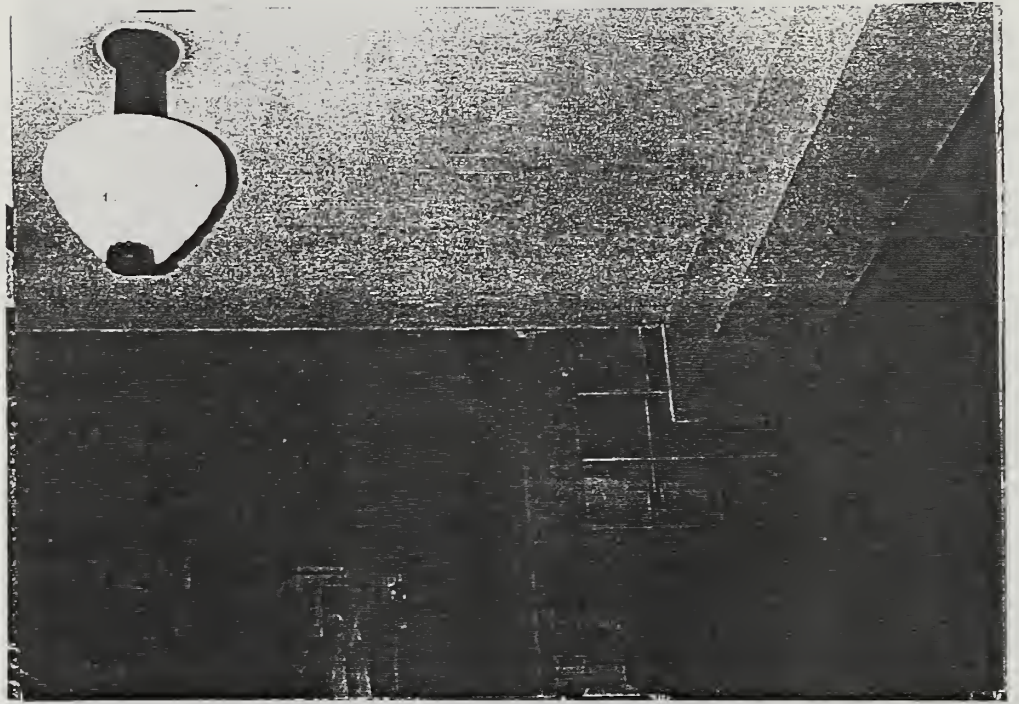




24. Area Q



25. Area R



26. Area S

27. Area 16



28.

Stains
before treatment

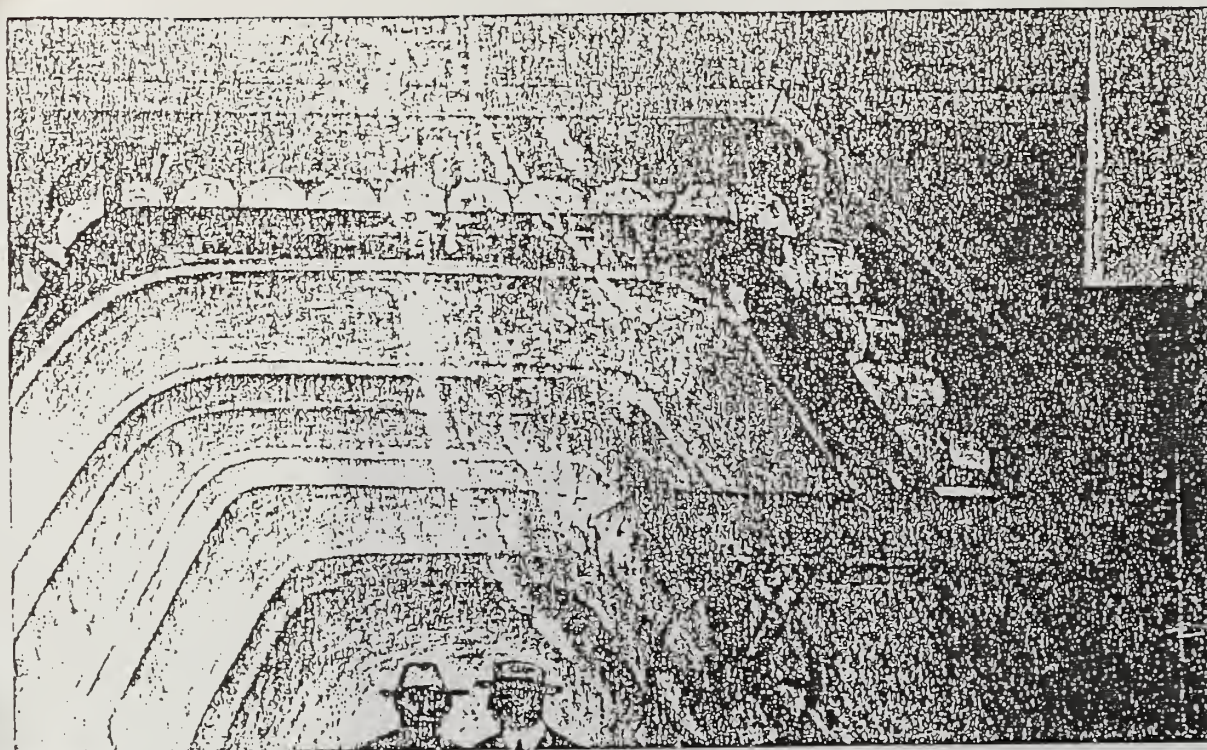


29.

Removal of stain
by simple poultice

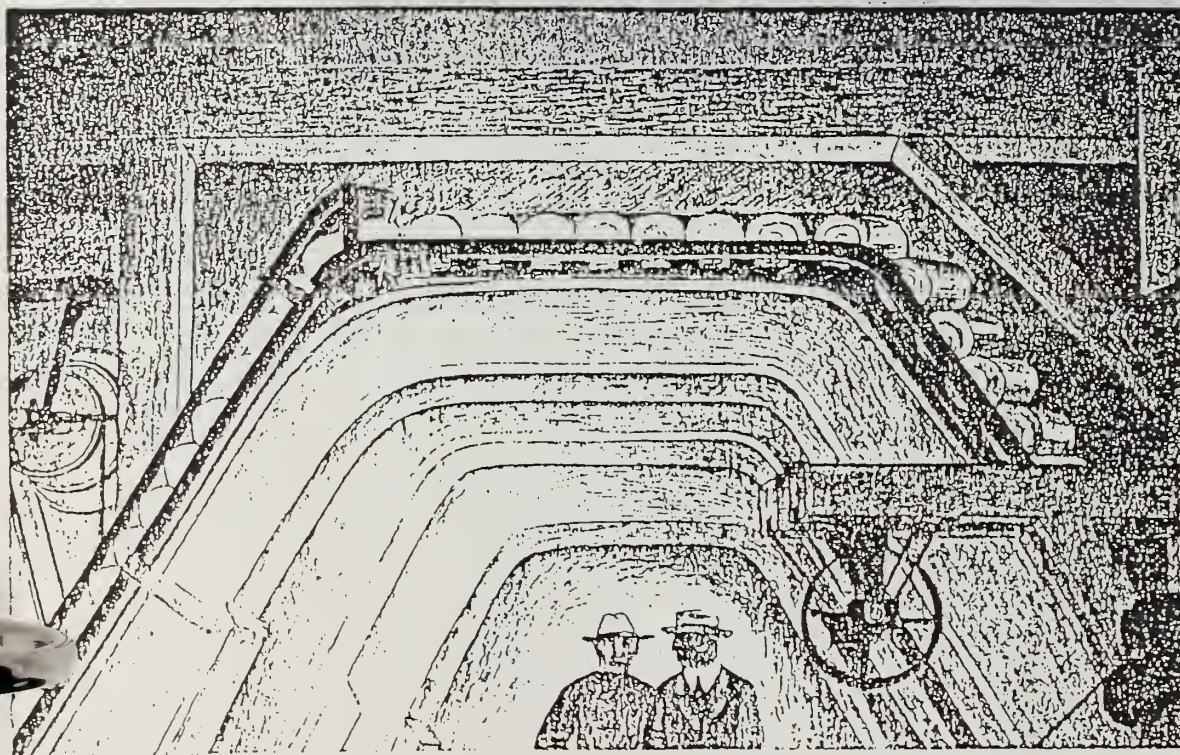


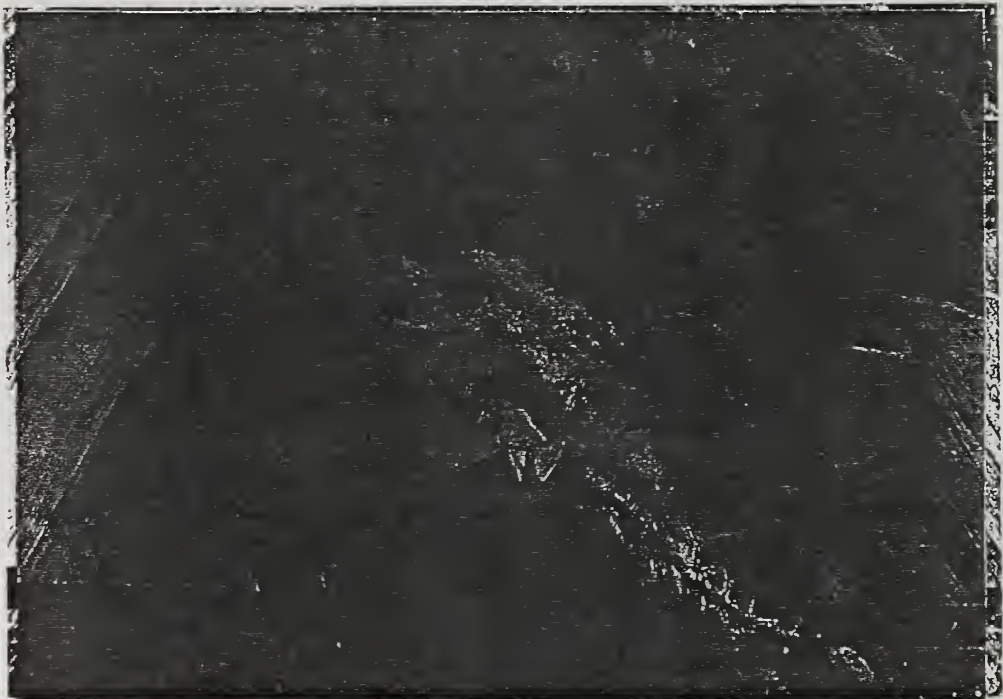
30. Pilot removal of
greasy and fixed grime



31. Area before 1975 treatment

32. Area after 1975 treatment





33. The same area in 1987



34. Area of acrylic emulsion medium



35. Second Floor, paint scheme.
The ceiling is mint green with a
"Pompeian Red" border.



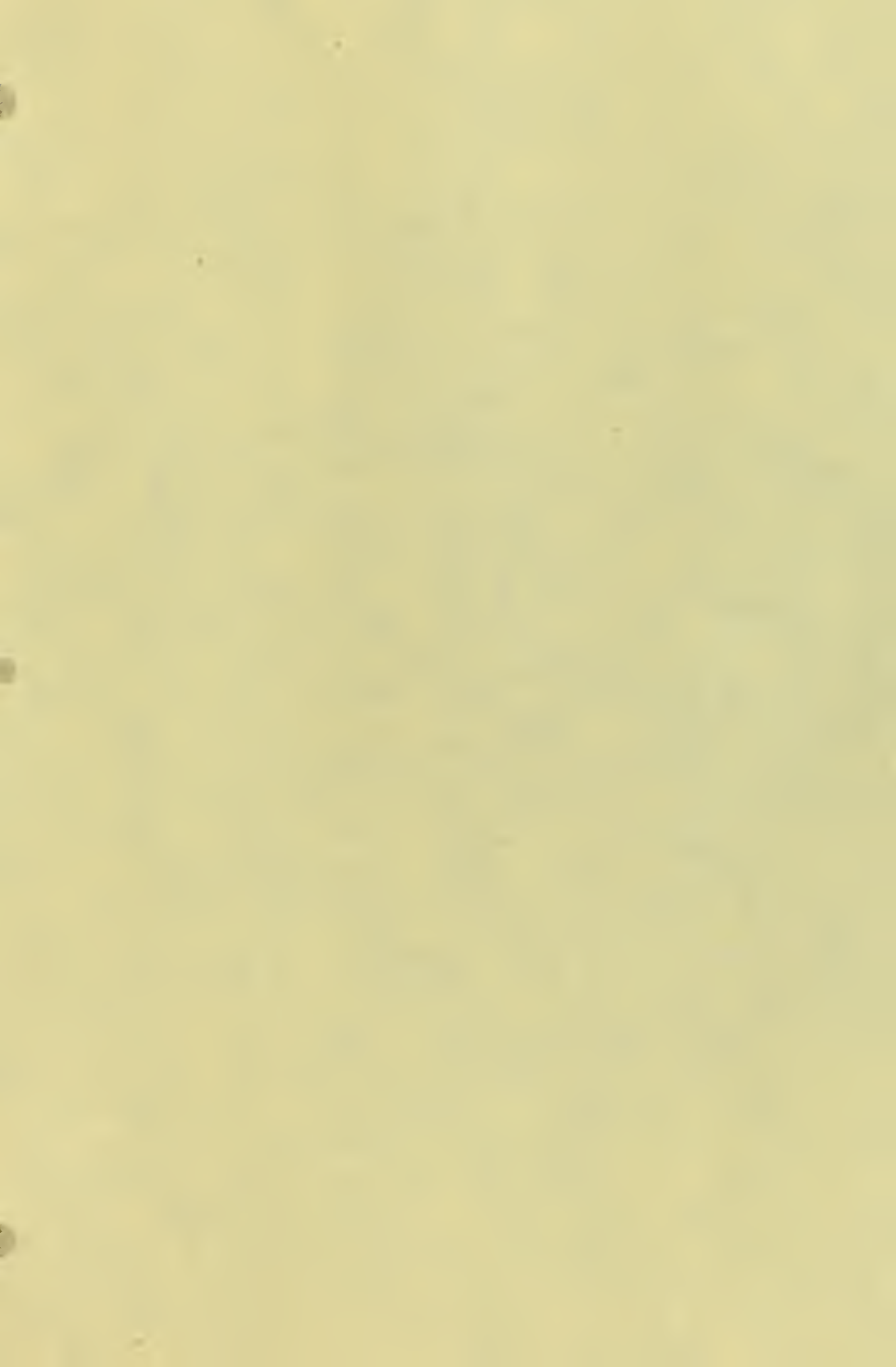




EXHIBIT C.

**REPORT ON THE FRESCOS OF COIT TOWER:
TREATMENT, PROBLEMS, AND RECOMMENDED MAINTENANCE;
PREPARED BY ANNE ROSENTHAL**

COIT TOWER
MURAL CONSERVATION PROJECT
TREATMENT REPORT

By Anne Rosenthal, Conservator-in-charge

AUGUST 1989

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COIT TOWER
MURAL CONSERVATION PROJECT
TREATMENT REPORT

By Anne Rosenthal, conservator-in-charge

Introduction

The mural paintings in Coit Tower were executed in 1933-34 under the auspices of the Federal Art Project in San Francisco. Twenty-five artists and their assistants were chosen among applicants who submitted designs for the decoration of the first and second floors of the interior of the building. The subjects of the paintings are the agricultural, commercial, and social life of California.

In her book on the history of Coit Tower, Masha Zakheim credits Dr. Walter Heil, chairman of the Art Project committee, for choosing the fresco medium for the paintings. Working in one medium served as a unifying experience for the artists who were diverse politically and artistically. With the exception of paintings executed on canvas in the elevator lobby, and one painting in tempera on the second floor, the paintings were painted in true fresco technique: pigments ground in water are applied directly to damp lime plaster and become bonded as the plaster dries.

The Tower is a reinforced concrete shaft which rises 180 feet, above a rectangular base. The base of the building houses the murals of the first floor and a small series of rooms on the second floor with a promenade roof deck above the first floor.

The downpour of rainwater around Coit Tower collects on this promenade roof deck. Since construction of the building, the juncture of the roof and the tower shaft has provided access to rain, which has leaked into the first floor. In addition, water seepage into the tall tower shaft percolates down to both second floor and first floor murals.

The site of the tower exacerbates infiltration and weathering, as it is exposed and entirely unprotected atop Telegraph Hill on the north bay side of the San Francisco peninsula. In addition to its



location and design difficulties, there are no interior environmental controls to help preserve the murals.

Other conservation problems are presented by the estimated 200,000 visitors per year who are drawn by the magnificent view of the city and bay of San Francisco. Control of public access to protect the murals has never been adequate. Indeed, in the early years after the opening of the building, vandalism of the paintings was rampant. Several restoration campaigns were undertaken to correct past damages, employing the original artists or other muralists. Documentation of these early efforts is scanty.

In 1985 the City of San Francisco began a comprehensive restoration of the building. Simultaneously, the San Francisco Arts Commission applied to the National Endowment for the Arts and the State of California for financial assistance and a mural paintings conservator to address the deterioration of the paintings. At this time a preliminary examination of the paintings was made, along with recommendations for conservation treatment.

After grant funds were secured and the building repairs commenced, a two-week pilot study of the murals was carried out in June, 1987. The pilot conservation project investigated the immediate problems of infiltration of water, which actively damaged the plaster and paint. Pilot conservation treatments were conducted to secure the paintings in the water-damaged areas. The findings were described in a report entitled "The Frescoes of Coit Tower: Pilot Conservation Studies" by Anne Rosenthal and Constance Silver. This report, and additional information about the Tower's history, structure, and repairs are contained in the extensive collection of documents within the Historic Structure Report.

In order to assess the efficacy of building and roof repairs, the larger conservation project was scheduled for a full 15 months after the Pilot Study. The findings and treatment of the murals undertaken between September 1988 and February 1989 are the subject of this report.

The mural paintings were conserved over a period of five months. The project focused on the paintings in the main hallways of the first floor, excluding the elevator lobby. The main lobby is the site of most of the water damage, vandalism and previous repairs. The elevator lobby and second floor, which are in a relatively better state of preservation because they are non-public areas, will be the subject of a second phase of conservation treatment in the future.

The conservation treatment of the murals entailed: removal or reduction of salts; consolidation of weakened plaster; surface cleaning of discrete areas; selected removal of old overpaints; repair and filling of holes, gouges and scratches; and visual reintegration (inpainting) of old and recent damages.

This conservation report describes: condition of the murals prior to treatment; environmental factors that caused their deterioration; philosophy of and approach to the conservation project; methods and materials of treatments; and recommendations for long-term conservation. Selected graphic and photographic documentation is included with this report

EXAMINATION AND CONDITION REPORT
COIT TOWER MURALS, FIRST FLOOR

1 EXECUTION OF THE FRESCOES

1.1 Application of the Plaster:

A large lacuna in the Stackpole mural provides an area to study the stratigraphy of the fresco support. While the layers composing this one painting may not be representative of every painting, the working methods and materials used by the plasterers appear to be consistent.

There are three layers of plaster over the reinforced concrete walls of the Tower. The first layer is a granular cream/beige rendering, used to smooth the surface of the concrete wall. This "scratch" coat contains fibers which help to contain and disperse moisture in the rendering. Fibers also provide additional strength. The thickness of this layer is approximately 5mm.

A second scratch or arriccio layer is a darker beige color and does not contain fibers; it is approximately 8mm in thickness.

The artists painted a preliminary sketch on the arriccio, using an earth-red pigment. Called the sinopia, the sketch is a traditional element in Italian fresco painting. Official WPA photographs taken in 1934 of the artists at work in Coit Tower show extensive preliminary drawings, which were sometimes changed in the final paintings. The sinopia was also used at Coit Tower to leave instructions for the master plasterer, indicating the area and time of day the next day's work should be prepared. (see archival photos from the WPA collection of the San Francisco Museum of Modern Art).

The final layer of plaster is the intonaco (approx. 4mm thick) which is composed of finer charge and a greater percentage of lime. This layer is bright white. Most of the paintings are uniformly troweled to a smooth and lustrous finish.

The plaster is exceptionally well prepared, having good proportions of charge to lime. Each plaster layer is strong and there are very few shrinkage cracks.

Joins in the plaster, the giornate, indicate the boundaries of each day's work. These are well hidden in most of the murals, attesting to the skill and good craftsmanship of the plasterers, as well as to the careful planning by the artists. Occasionally

joins are visible as a result of junctures within color fields, or because of lighting effects.

Other markings of the plaster support indicate the artists' working methods. Pin holes appear in some of the paintings (ie. Gordon Langdon) where paper cartoons were hung during the transfer of the design to the wall. Pounce marks (spolvero), which are small dark dots of graphite or charcoal, were used by some of the artists to transfer the principal lines of their drawings from the cartoons (ie. Ralph Stackpole). Incised lines (incisione) dent the plaster where artists traced over cartoons into the wet plaster (ie. John Langley Howard).

1.2 Application of Paints:

Shirley Triest (assistant to Bernard Zakheim) recalls one colorman who ground the pigments for all the artists on the project. Colors have not been identified by pigment analysis, however they appear to be consistent with the palette of colors resistant to caustic lime. No obvious secco (that is, applied after drying of plaster) details have been identified, although some may exist. Since the artists' materials were furnished on the job, the palette is assumed to be common to all the paintings.

Colors were ground in water and applied to the wall while the plaster was wet. Characteristic of this wet into wet technique on a dense, smooth surface, each stroke shows a buildup of color at the start and finish points of each brushstroke. The greatest accumulation of color appears at the finish of the stroke. There are variations of this phenomenon as each artist painted with different loading and pressure on the brush. Some of the colors were laid on in very thin and transparent ways (Maxine Albro). Others were very full and luminescent with color (John Langley Howard). Still others are very thick and opaque with pigment (Bernard Zakheim), and some have pronounced, rhythmic brushmarking (Ralph Stackpole).

Some passages, particularly finishing touches, seem to have been applied to partially dried plaster (ie. Maxine Albro, oranges). These colors are not as securely bound in the plaster as other areas, due to the lack of carbonation of the pigments with available calcium hydroxide in the wet lime. These can be considered secco finishes in the sense that they were applied too late in the painting process. "Secco" in the traditional sense, implies the addition of another binder (gum, glue, egg, casein, etc.), which was not detected in these paintings. A photograph of one of the artists using a flit gun to keep the surface of the plaster damp leads one to suspect that the artists took liberties



with the medium, producing some inherent instability of the final product.

1.3 Borders:

The colored borders around the paintings were added after the frescoes were completed; WPA photos show unfinished concrete surfaces while the paintings were in progress. The borders are a pigmented rendering, a deep earth red color, which helps unify the paintings and bring them into relationship with the terra cotta tone of the tile floor. The earth-red stucco has a slightly sparkled appearance, as do the frescoes, due to the reflections of light from the crystals of marble dust or CaCO_3 in the renderings. A band of red color was painted on the ceiling at the periphery of the paintings to echo the stucco borders. The color schemes are discussed in the Historic Structure Report, and several extant examples of the original color scheme can be seen on the second floor.

2 CONDITION OF THE FRESCOES

2.1 Plaster Support:

The plaster support of the murals is structurally very sound. With few exceptions, each layer is well bonded to the next. A few very small areas of separation were located between the intonaco and arriccio.

Cracks in the murals are sparse. Some are three-pronged shrinkage cracks characteristic of the fresco technique, while most appear to be the result of building and earth movement. All these cracks were located and recorded prior to building renovation. None were found to be effected by building renovation, and none were considered unsound or requiring treatment.

2.2 Water Damage:

In areas affected by water, the plaster has become more porous, friable and powdery. Some areas are deeply etched where water has repeatedly run over the surface. Effloresced salts appear both as long filaments and as a powdery veil. Additional comments about water-damaged areas have been described in the Pilot Study, dated June 1-12, 1987. Water damage is located on the graphic documentation of this report.

Some of the salts have reappeared since the Pilot treatment in 1987 (ie. Hesthal, Albrow, Vidar and Harris), probably provoked by the power washing of the building in June, 1987, (part of the building restoration program). The power washing schedule unfortunately was not coordinated with the Pilot conservation work on the murals.

Some brown stains remain in water-damaged areas, even after the pilot treatments. These are apparently caused by seepage of moisture over rusted rebar or deteriorated roof membrane. Similar stains were pervasive throughout the ceiling in 1987.

2.3 Losses (of Paint and Plaster):

The plaster has suffered losses periodically from the installation of fixtures into the surfaces of the paintings. Glass doors were installed (1959?) to prevent public access to the ground floor murals beyond the rest-room in the main entrance hallway. The doors were secured by bolting hardware through the mural surfaces. Four large losses in the mural resulted from this installation. When the doors were later removed, a white filler was used to plug the losses in the paintings. Some of the plugs are located in the stucco borders as well as in the frescoes.

A guard rail was installed after the 1975 restoration and after the glass doors were removed, to help protect the murals. The system consists of poles fitted into the floor, and a velvet rope which clips onto the poles. At the end of each unit of guard rail the rope clips onto a fixture screwed directly through the mural surfaces. Repeated handling of the anchors, and pressure exerted by visitors on the rope, cause the screws to pull out of the walls. Many small screw holes have thus widened into large circular holes in the intonaco. Anchor holes are often accompanied by a crescent-shaped gouge in the intonaco, resulting from the friction of a pin on the rope. There are smears of plaster dust embedded in the intonaco from these holes.

The plaster and fresco surfaces are greatly marred by scratches, etched graffiti, impact, and abrasion, especially in the main entrance hallway, which lacks the guard rail. Not all the damage is malicious; in fact, much of the new damage (since 1975) is the result of haphazard handling and accidental wear and tear. In addition to damage caused by visitor traffic, damages result from impact by mop handles, ladders, etc., used by maintenance staff. The amount of damage is, collectively, extensive and alarming.

The condition of the intonaco, while structurally sound and visibly intact for the most part, is seriously defaced under the

layers of past restoration. The extent of the damage was not fully known prior to the 1988 conservation treatment. There are few reports on past examinations and treatments. There is little previous photographic documentation. Past restorations are well disguised either by the skill of inpainting, or by the unexpected extent of overpainting.

The actual extent of loss to the murals has now been ascertained. Some murals, particularly in the main hallway (Howard, Boynton, Langdon) and the large paintings on the interior walls (Stackpole, Arnautoff, Albro) are extensively damaged by graffiti. The male figures on exterior walls were targets of vandals. For unknown reasons, the smaller paintings at the east and west corners are in better condition overall.

The most easily identified paint and plaster losses are due to water infiltration and mechanical injury, which expose the stark whiteness of the intonaco. White losses disrupt the composition and pictorial illusion, and cause one to overlook the more subtle degree of alteration of the paintings due to past restoration. Former restorations, while not immediately apparent, contribute to the obfuscation of the original work of the artists. A comprehensive examination of the paintings reveals this more subtle (and pervasive) alteration.

2.4 Burnishing:

The plaster surface is altered in the lower registers due to repeated handling. Besides accumulations of handsoil, there is a textural change of the surface due to repeated rubbing of the surface. In specular light the lower registers have a glossier surface relative to the upper registers.

Several burnish lines which appear to be the result of old installations are located in long horizontal bands over the restrooms. Other areas of burnishing are scattered.

2.5 Paint Layer:

(see also Exam. of Past Restorations)

The paint layer is generally secure in most of the paintings. There are several exceptions, and losses are scattered.

One type of deterioration, which is perhaps related to the artist's technique, is located on the Howard panel, just inside the main entrance. The interlayer cleavage and poor adhesion of the paint film (on the raised hand and forearm of the metal worker) may have been caused by the artist working over an

already dry surface. These areas have been previously restored, so the damage is quite old and not considered to be an ongoing problem.

Other losses due to flaking paint occur in some heavily pigmented areas, such as in the Albro oranges, and the Zakheim books. These losses are also thought to result from inherent weakness, aggravated by environmental factors.

2.6 Surface Coatings:

Some of the surface coatings on the paintings are described in the SUBSECTION "Examination of Past Restorations". Other coatings include unintentional spotty deposits of hand soil and foreign matter.

Hand soil forms a shiny, milky-grey film around doorways and all easily accessible areas up to a height of about five feet from the floor. The paintings are not always clearly readable beneath this film. Surface coatings are detrimental to the paintings because they alter the original color and matte surface quality of the paintings, and they can change the permeability of the plaster.

Drips and splatters are located sporadically throughout the first floor. These consist of ceiling paint and cleaning agents used by janitorial staff.

Finally, a light layer of airborne dirt exists overall. The top edges of the paintings are more soiled than lower SUBSECTIONS. Airborne dirt imparts a grey/brown cast to the paintings and forms a hygroscopic layer above the plaster.

A very black accumulation of soot is deposited on the paintings over the light fixtures in the front entrance.

Cobwebs are ubiquitous near the ceiling where junctures with the beamed ceiling form good nesting places. A variety of insects, both dead and alive, were observed on the walls, floor and in the restrooms.

3 PAST RESTORATIONS

Masha Zakheim, in her book on Coit Tower, states that various individuals made repairs to the paintings over the years, including the artists themselves. The details of this work are

not known, but some incongruous overpaints and filling materials were found to verify her statement.

Research at the San Francisco Arts Commission and the Archives of American Art provided information relating to at least two former restorations in recent times.

3.1 1960-62 Restoration:

Dorothy Puccinelli Cravath, an accomplished artist, worked on the murals sometime between 1960-62, under the supervision of Henry Rusk (restorer at the DeYoung Museum). No report on her work or on the condition of the paintings is known to exist. Masha Zakheim states that Cravath restored vandalized portions, engaging when possible the original artists for retouching (ie. Bernard Zakheim).

3.2 1975 Restoration:

Emmy Lou Packard, also an accomplished artist, worked on the paintings in 1975 and prepared reports entitled "Cleaning and Restoring the Murals, May 15, 1975" and another entitled "Coit Tower Repair, My Report in August, 1975".

Packard's scope of work included all the paintings of the first and second floors. The reports mention the repair of damage due to water seepage at the tops of the walls and under the sills of the windows. Also mentioned are repairs of cracked plaster, chips around windows due to window replacement, and repairs and retouching to 565 scratches, chips and holes.

She mentions filling voids with lime plaster putty containing marble dust. Retouching was done with thinned Liquitex® and distilled water. Lower window areas were coated with two applications of Matte Medium (receipt found by Lehane of Arts Commission of unknown brand of spray fixative from Adolph Gasser photographic supply).

4 EXAMINATION OF PAST RESTORATIONS 1988

4.1 Overpaints:

The most significant alteration due to past restoration resulted from the overpainting of the original surfaces.

Past restorers faced extensive damage due to graffiti and vandalism. The damage was so extreme that the task of

reintegrating the design must have seemed naturally to require the repainting of some parts of the paintings. Certainly, overpainting is more expedient than "inpainting" (confined only to areas of loss). Some losses were overpainted just enough to blend out the new color to match the old, such that the boundary of the loss would be blended with the intact original; some entire forms were repainted to help disguise the damage, while in some cases whole color fields have been repainted. Good examples of total repainting include the green mailbox on the City Life panel by Arnautoff (heavily damaged prior to 1975, see photo M. Zakheim book), and the entire lower SUBSECTION of the Albro on the left (south) panel.

Overpaints are distinguished in a number of ways. The 1975 acrylic paints can be identified in specular light by their satin sheen. These paints also look heavier and more opaque than the original fresco surface. The luminosity and transparency of the original fresco surface is very difficult, if not impossible, to re-create with other media. The variable passage of light through translucent layers of color to the brilliant white support, and the compactness and sheen due to the original troweling of the plaster, is not retrievable once the surface has been altered in any way.

Examination of the paintings reveals distinctly different handling of the inpainting in previously restored areas, which easily distinguishes the two major campaigns of restoration.

Some of the shallow losses are inpainted (without filling) in a very light hand, with the dotted application of color confined to the limits of the loss. Some of this style of working can be seen on the Stackpole and the Arnatoff. These areas are thought to be the work of one person, and probably Dorothy P. Cravath. This work is executed in an unknown medium which does not easily dissolve. Dorothy Puccinelli Cravath as an artist is known to have painted murals in egg tempera, and this may have been used in the restoration at Coit Tower.

Most other retouching is done in solvent-sensitive acrylic (Liquitex), as described by Packard. These retouchings are by far the most extensive. Most of the repainted SUBSECTIONS are executed in this medium.

A few other miscellaneous overpaints are present, especially in the front entrance hallway. Some of these are re-soluble water-based paints, insoluble water-based paints, re-soluble and insoluble oil based paints.

Previous retouchings are identified in some instances by the poor match of color due to color alterations which may have occurred over time. There was obviously some lightening and some darkening of certain colors. Where the color is poorly matched, the retouchings break up and disfigure the design.

Retouchings contribute to the uneven sheen of the surface of the paintings.

4.2 Fills:

Filling material used to repair deep losses also contributes to uneven surface sheen. Various fillers are present, but the majority of the fills are composed of a synthetic gesso (1975?), readily soluble in xylene. Many of these fills are well executed, however, some are uneven and overfill the boundaries of the loss (ie. green shirt of Albro figure). Still others are surrounded by shiny vignettes or abrasions where the tool used to level the fillings burnished surrounding surfaces.

4.3 Surface Coatings:

Several surface coatings are identified as later additions to the paintings.

One such coating identified as "Matte Medium" by Packard was applied in two coatings over the lower portions of each window sill to protect against water drips. This coating is also present on the southwest corner of the Stackpole near the ceiling, at the center of water infiltration. This may have been applied as a fixative and/or to correct the opacity of saline efflorescence. This coating behaves like a crosslinked film. It is not re-soluble.

The use of plastic (synthetic) retouching paints and coatings has had a detrimental effect on the paintings in water-damaged areas near the ceiling. As explained in the Pilot Study (page 8) these coatings and retouchings trap water and waterborne stains and salts. Worse, the impermeability of these plastics extends the water and the damage into new areas.

A second very deteriorated coating is present on some of the paintings (ie. Hesthal), and is believed to have been applied as a transparent coating during the 1960's restoration to saturate certain parts of the design. This was probably done to enhance the three-dimensional effect of the paintings and/or to mask efflorescence.

This "Hesthal" coating was apparently applied with a wide brush (strokes are visible). None of the artists' brushwork is done with such a wide brush, so the artists are not likely to have applied this coating.

The Hesthal coating in its deteriorated state is visible in photos taken for the M. Zakheim book. Unlike the acrylic coatings which form a film on the surface of the paintings, this substance penetrates the pores of the plaster and is now almost integral with the paintings. Of unknown composition, it has a hazy, chalk-like cast. Only a portion of the coating in some areas has been found to be soluble in resin soaps.

A third coating is located over the main entrance doorway on the Olmstead mural. The coating is also present over the windows on the west side of the building. This coating is very sensitive to moisture and is slightly tacky, attracting ambient soot.

5 CONSERVATION PROJECT September 1988 - February 1989

5.1 Participants:

Anne Rosenthal, James Bernstein, Gregory Thomas, Constance Silver, J. William Shank, and assistant Michael Dunn

5.2 Goals:

The purpose of the conservation project was to stabilize and visually reintegrate the murals, and to provide for their long-term conservation.

5.3 Examination and Testing:

The paintings were examined with 10x magnification, in normal, raking and specular light, and with ultraviolet luminescence.

Most examinations and treatments were performed with supplementary quartz illumination, on the order of 2,000 watts.

Comprehensive preliminary cleaning tests were conducted on a small test panel (see Cleaning SUBSECTION).

5.4 Research:

The Archives of American Art and the SFMOMA were queried by the Registrar of the Arts Commission for archival documents and photographs of the murals. Additionally, individuals with direct

knowledge of the murals' history and technique of execution were queried (ie. John Langley Howard, Shirley Triest, Emmy Lou Packard).

The technical literature on fresco painting conservation was reviewed. Discussions were held with professionals engaged in fresco conservation projects (i.e. U.S. Capitol rotunda project).

5.5 Photographic Documentation:

The Arts Commission arranged with another City department for black and white photographs of pre-treatment conditions; each fresco was photographed in black and white in 1986. Overall 35mm color slide transparencies were taken during treatment and after treatment (35 mm transparencies) were taken by the conservators' assistant.

6 CONSERVATION TREATMENT

5.1 Treatment of Efflorescence:

Treatment of water damaged areas is explained in the Pilot Study by Rosenthal and Silver. This report should be consulted for further detail.

Stains and salts were reduced by a variety of poulticing methods. Flaking paint was temporarily secured. Repeated treatments to reduce salts and to consolidate plaster were necessary during the September- February project because some of the salty veil of soluble salts returned after the Pilot project (ie. Hesthal, Albro, Vidar, Harris).

Re-treatment was done with Japanese tissue poultices and distilled water, until efflorescence was removed. The Hesthal required the additional use of AB 57 in methyl cellulose and mechanical removal to diminish some insoluble salts. Flaking paint in these areas was set down by pressing with damp swabs through Japanese tissue.

6.2 Consolidation of Plaster:

The plaster and paint of many of these water-damaged areas were unstable. To strengthen the plaster, to secure the paint, and to provide a stable inpainting base, an inorganic consolidant based on ethyl silicate (ProSoCo Stone Strengtheners OH in mineral spirits) was applied.

This consolidant introduces silica into the plaster, bridging disrupted and missing fabric. Although pore size is reduced, the plaster retains its porous structure, which ensures permeability. The plaster continues to "breathe", and thus should continue to transfer any water that might infiltrate.

Several applications were made following manufacturers instructions. Applications were repeated approximately 5-7 days later. The areas cured for approximately 7 days before any inpainting was done.

The inorganic consolidant was chosen for its stability and compatibility with the plaster support. This consolidant is not film forming as are others based upon synthetic resins (ie. Acryloid B72). The acrylic resins and emulsions applied in past restorations are impermeable. Thus, they trap infiltrated water, forcing its movement to an expanded area of evaporation, provoking increased deterioration. Therefore, acrylic consolidants were not employed.

Several small locations of insecure plaster due to separation between intonaco and arriccio were stabilized with injections of adhesive through hypodermic syringe. A polyvinyl acetate emulsion (Jade 403) in distilled water (1:1) was used.

6.3 Cleaning:

The objective in cleaning is to re-establish as nearly as possible the original appearance of the paintings, and to remove particles and films which may have long term detrimental effects on the stability of the plaster support. Since there are always risks to fragile pigments in any cleaning procedure, the most conservative cleaning is prudent.

6.4 Surface films:

Localized films of handsoil were removed by swab application of aqueous solvents, (orvus, aerosol OT, and saliva). Saliva was most effective in removing some of the oily smudges; these were rinsed with an alcohol/distilled water solution. Other aqueous solvents were rinsed with distilled water alone.

The three coatings described in the SUBSECTION "Examination of Past Restorations" were not effectively removed from the paintings. The first two coatings responded only to very active organic solvents with friction. Safe removal of these coatings from delicate paint surfaces was, therefore, not possible.

The third coating was experimentally removed with aqueous solvents from a portion of the wall above the windows on the west side of the building. This SUBSECTION of wall is a neutral color, with no design (it is executed a secco and and it is not part of the mural). Results were not satisfactory and did not significantly improve the overall appearance of the wall. The Olmstead mural is the only other location of the coating. Because the mural was sensitive, the film was left in place. The film is hygroscopic and should be examined regularly for any signs of deterioration.

In regard to general grime, the paintings are very well preserved and appear almost unaltered through the middle and upper registers. Cleaning, therefore, required only very light dry cleaning with a Wishab sponge (Talas supplier). Results were harmonious, and further cleaning in middle and upper registers was not warranted.

The lower registers of the murals were problematical. Handsoil and other films required more vigorous cleaning. Because old retouchings are numerous in the lower registers, and many of these were sensitive to cleaning agents, problems associated with the removal of old restoration had to be addressed in order to effectively clean the lower SUBSECTIONS of the murals.

Several tests were conducted to develop a consistent method for cleaning the lower registers, including determination of which old retouchings to remove. Testing was confined to one manageable panel before proceeding to other SUBSECTIONS.

The Arts Commission Registrar was consulted following the tests. The testing procedure and approach to cleaning will be discussed in the following SUBSECTION. The primary objective was to achieve a balanced effect of cleaning between the upper and lower registers of the paintings.

6.5 Test Panel and General Approach to Overpaint Removal:

The far right end of the Boynton was selected for test cleaning. This panel is a figure of a worker with a jackhammer. It is located next to the telephone booth, where it receives a great deal of visitor contact. Because of its relatively small size, types of soil, deterioration and past restoration, it was an ideal test panel.

The painting was tested with a broad spectrum of dry cleaning agents, aqueous detergents, organic solvent mixtures, poultice compounds and solvent emulsion gels. Solvents based on ammonium

carbonate, bicarbonate and sodium bicarbonate were extensively tested.

Test results indicated that solvent cleaning would present certain risks and must, therefore, proceed with caution. Although the first results of cleaning with ammoniated compounds were promising, subsequent trials with these and other solvents provoked sensitivity of the paint both to solvent action and friction. Within the same giornata, some parts of the fresco were stable, while others were very fragile. Given this inconsistent reaction, no single cleaning method or solvent system could be considered safe for general use.

Because the frescoes are the work of many different artists whose work is not uniform, their combined vulnerability and unpredictability posed too great a risk of damage to undertake an extensive cleaning campaign. Since the paintings are considered "young" and may not be fully carbonated (a process which would increase the resistance of the paintings to solvent action), overall solvent cleaning is not advised at this time.

Most of the overpaints were removed from the test panel, to assess the actual condition of the fresco, and to evaluate the efficacy of inpainting the damage. The overpaints were dissolved by repeated applications of xylene, toluene, and/or acetone solutions. Any insoluble retouchings were left in place. Overfilling was removed or diminished with these same solvents.

The extent of overpaint on the fresco far exceeded expectations derived from initial visual examination. These overpaints were not detected because: some of the overpaints were well matched to the original paint; some covered very large areas which were not suspected of damage; and the brilliant white plaster exposed by recent damage distracts from the more subtle inconsistencies of tone produced by old repaint.

Extensive prior damage was uncovered when the overpaint was removed. Therefore, it was decided to remove only those overpaints that seriously compromised the appearance and/or legibility of the original surface.

6.6 Compensation of losses:

The most significant losses due to mechanical damage were filled with a spackle containing calcium carbonate and a polyvinyl acetate emulsion binder (Dow "Dap" spackling putty). Deep losses were filled in several applications to avoid shrinkage. Filling material was cleaned from adjacent surfaces with distilled water

and/or alcohol. Fills were smoothed with fine abrasive papers. Old fills were removed or corrected around windows and doorways only as necessary. Very shallow losses were not filled.

The greatest number of fills were located around windows and where mounting fixtures for the barrier system were located. The largest fills were those compensating holes left by the installation of the glass doors in the main entrance hallway.

Only deepest losses in water damaged areas were filled. Where possible, the roughened plaster in these areas was inpainted without filling. Filling was kept to a minimum in these areas since fills may create zones of differential moisture absorption, and fills contributed to the difficulty of color compensation. Filling was needed to help strengthen the support in some areas, however.

6.7 Inpainting:

Inpainting was done with LeFranc and Bourgeois acrylic resin paints, soluble in petroleum naptha and xylene.

A precise match of both color and surface quality, particularly in burnished and water-damaged areas, required constant adjustment in technique of inpainting. Dry pigments or cabosil matting agent were sometimes added to the inpainting medium.

Pastel pencils were occasionally used to augment inpainting, especially near the ceiling in water damaged areas, to avoid the buildup of acrylic inpainting. Moisture transfer is important in these areas, and the pastel will permit some continued transfer of moisture if the areas become wet again.

Old repairs that could not be removed were inpainted. Adjustment of old retouchings in this manner resulted in closer color matches, a better illusion of translucence, and a more characteristic surface quality. Whenever possible, disturbing repaints were removed. However, in general it was safer for the frescoes and more time- effective to inpaint the old retouching.

6.8 Surface Coating:

Historically, true fresco was never coated. However, several small areas were coated with Soluvar Matte spray varnish (n-butyl methacrylate). These included the window sill of the Howard painting (which needed some re-saturation due to the milkiness of the former coating). The large loss in the Howard in the cherry tree orchard was lightly sprayed to blend with the surrounding

area, burnished by former patching. The back of the fisherman in the Boyton was lightly sprayed to diminish blanching due to overpaint removal.

7 RECOMMENDATIONS FOR LONG-TERM PRESERVATION

The long-term preservation of the frescoes of Coit Tower is a principal objective of the overall conservation project.

Preservation requires that the agents of deterioration of these mural paintings be controlled. Three major agents provoke the deterioration of mural paintings: 1) inherent defects in technique of execution; 2) building pathologies; 3) external, generally human, agents of deterioration.

There are few, if any, inherent defects in the execution of the frescoes of Coit Tower. Therefore, building pathologies and external agents of deterioration play a greater role. If the frescoes are to remain in good condition, control of these agents will require regular examinations of the murals, and inspection of the interior and exterior structure of Coit Tower by appropriate professionals.

7.1 Examination of the Frescoes:

Ideally, the frescoes should be examined on a regular basis, and be reported on in a descriptive manner, at least every six months. Seasonal variations may exist and initially require additional survey. In conjunction with authorities of the Arts Commission and Office of the State Preservation Officer, an inspection survey form should be developed so that each mural can be quickly and comprehensively checked. In this way, recurring building pathologies, vandalism and deposition of surface grime or other accretions can be identified and corrected in a timely manner.

Regular inspections by a qualified conservator of mural paintings will require an ongoing financial commitment by the City of San Francisco. If inspections are made every six months, the cost will be quite modest, however, when it is compared to the cost of major conservation treatment that will be required if deterioration is overlooked for several years. Regular maintenance will prevent major expenditures and will mitigate situations which might lead to irreversible damage of the murals.

If inspection by a qualified conservator cannot be authorized, at the very least, a modified inspection system should be developed

for the Director of the Arts Commission so that any major developing problems of conservation can be identified and counteracted.

7.2 Building Pathologies:

Coit Tower occupies a position that exposes it to the full force of the weather of the San Francisco bay. The structure itself has always been problematical: infiltration of water into the mural paintings has remained a chronic problem.

It is assumed that the recent and extensive structural repairs have corrected all the building pathologies. Unfortunately, even the best repairs deteriorate through time and from weathering. Therefore, regular inspections of the building, and its known problem areas, must be carried out by a qualified restoration architect. Preservation of the building as a whole, with all its mechanical systems, has direct bearing on the preservation of the murals.

Inspection should also concentrate on the maintenance of a stable interior environment, not only on identification of more egregious building pathologies. Environmental factors are influenced by human access into and out of the interior, the circulation and quality of air, localized heating and cooling, and extreme sunlight. A basic system of ongoing monitoring of interior climate should be installed as soon as possible. This will contribute in a substantive way to the information urgently needed to develop proper control measures to reduce environmental stress on the murals.

Long-term monitoring of interior climate and regular examination of the structure of Coit Tower is within the purview of the City of San Francisco.

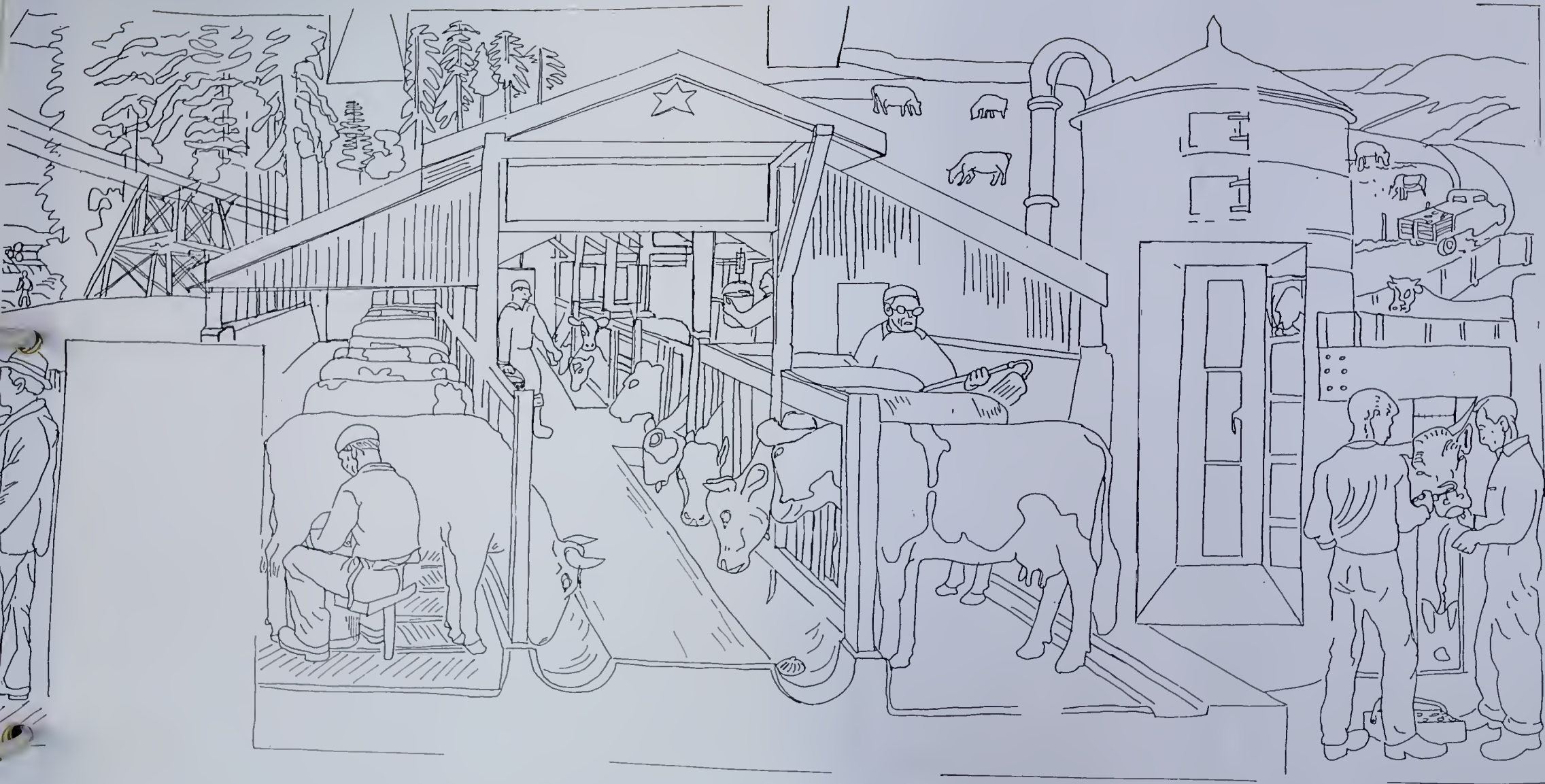
7.3 External Agents of Deterioration:

Individuals are responsible for much of the damage sustained by the frescoes in the past. Much of that damage, in the form of vandalism, was calculated. Recent measures, such as surveillance cameras and a barrier system, will help to control intentional damage. These systems must be maintained and fully operational to be effective. A guard or guards on duty to patrol the premises would probably enhance the effort to reduce damage due to vandalism and/or negligence.

Unintentional damage, such as impact by maintenance personnel during cleaning and movement of supplies in and out of the gift shop, has also occurred. Maintenance and shop personnel should

be instructed in correct interior procedures. A supervising individual must always be present when any major event takes place in Coit Tower. Delegation of this ongoing supervision is within the purview of the Parks Department, which oversees the use of Coit Tower, and is an area of personnel management which needs review.





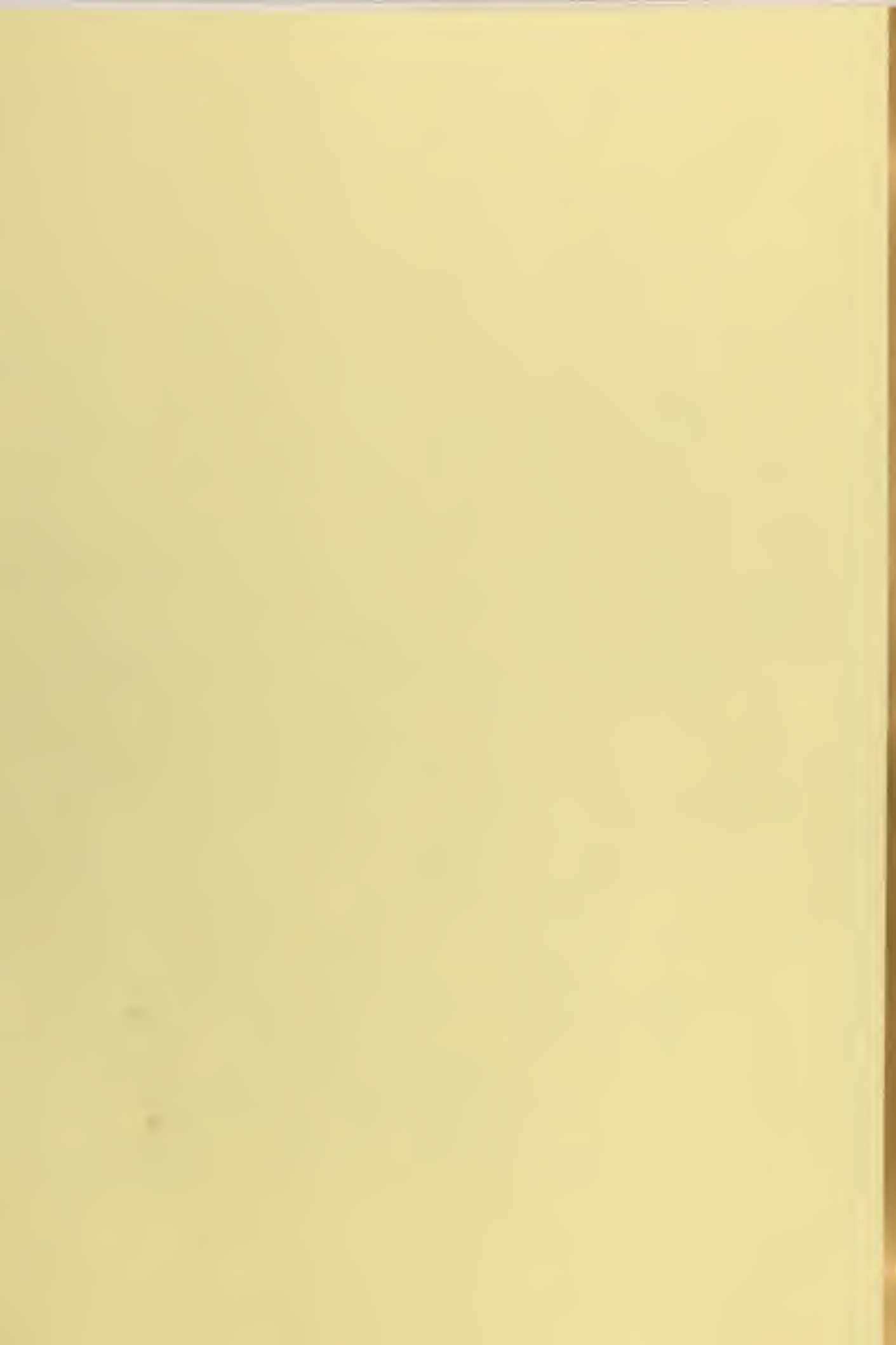


EXHIBIT D.

**MURAL PROTECTION PROJECT
ROBINSON MILLS + WILLIAMS
FEBRUARY 1989**



MURAL
PROTECTION
PROJECT

COIT TOWER
SAN FRANCISCO



REVIEW
Robinson Mills + Williams
Architecture and Interior Design
161 Pine Street
San Francisco
California 94111
415.781.9800

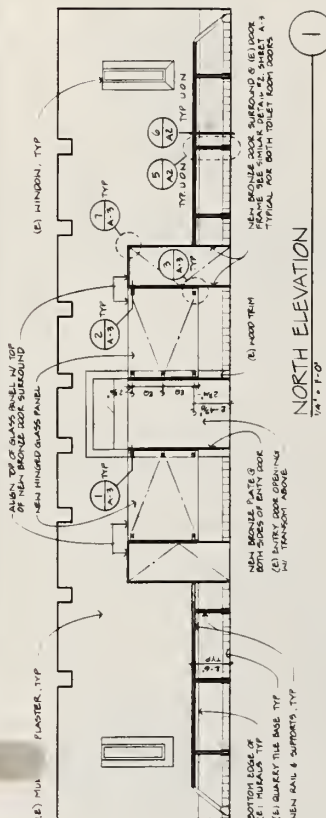
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Issue	Decision	Date
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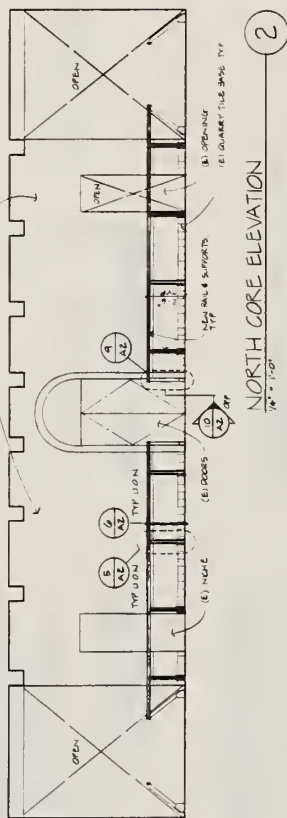
Scale	Values
Project number	000-30-00

ELEVATIONS/ DETAILS

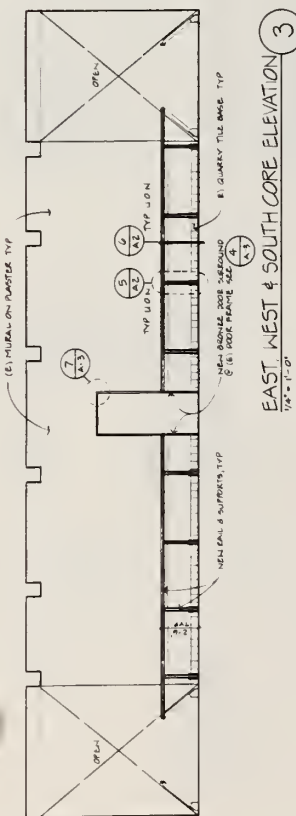
A2



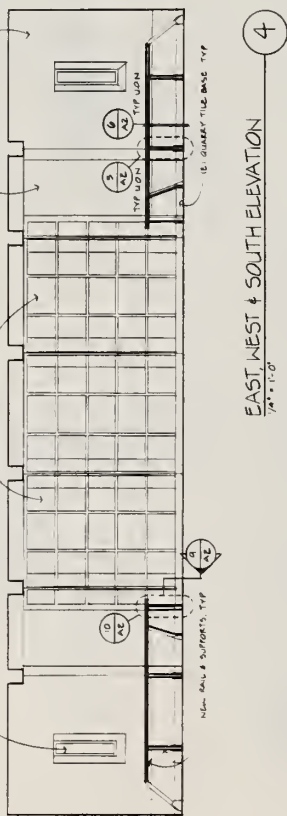
NORTH ELEVATION



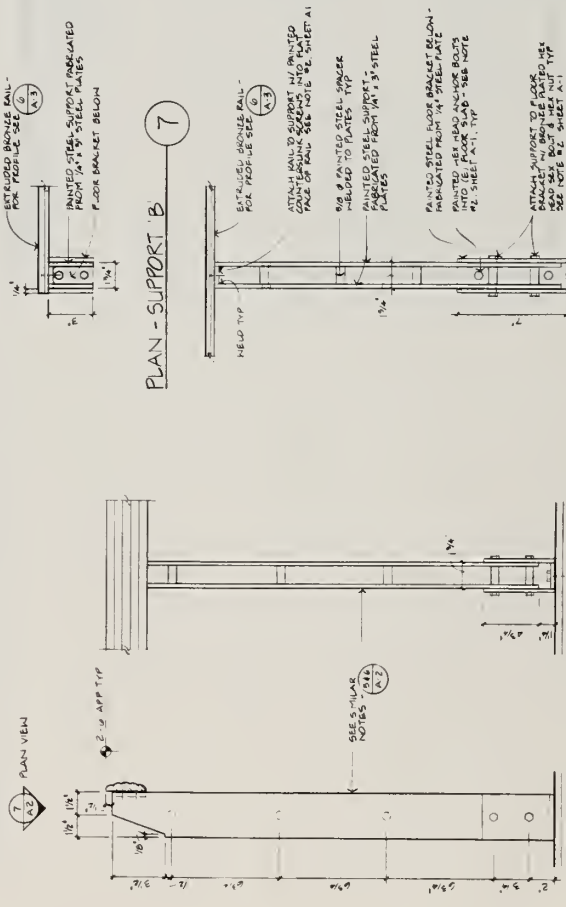
NORTH CORE ELEVATION $\frac{1}{4} \times 1.0$ 2



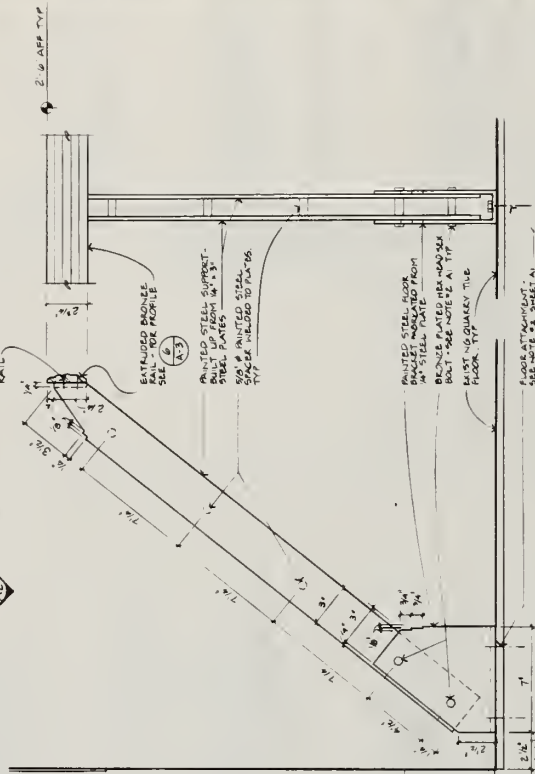
EAST, WEST & SOUTH CORE ELEVATION $\frac{1}{4}'' = 1'-0''$ 3



EAST, WEST & SOUTH ELEVATION



PLAN - SUPPORT 'B' 7



6 SIDE ELEVATION - SUPPORT 'A'

5 ELEVATION - SUPPORT 'A'

PLAN - SUPPORT 'A'

0 ELEVATION - SUPPORT B 9

SIDE ELEVATION - B'



RMW
 Robinson Mills + Williams
 Architecture and Interior Design
 160 Pine Street
 San Francisco
 California 94111
 415.781.9800

Drawn by: SM
 Checked by: AP

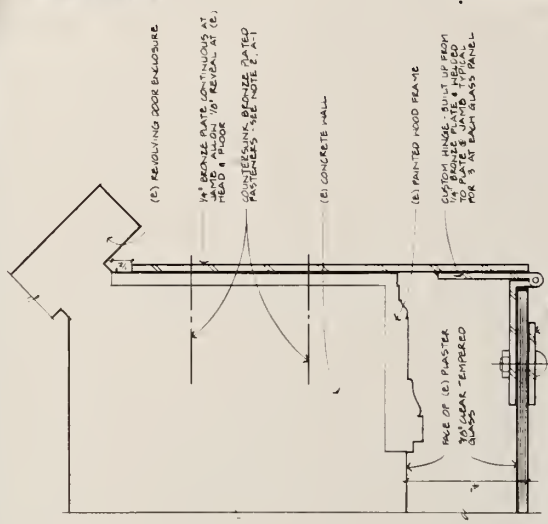
Approved for the Owner by:
 Approved for the Architecture:

Date	Description
2.21.04	DOOR CONSTRUCTION DOCUMENTS POWERED FOR OWNER REVIEW

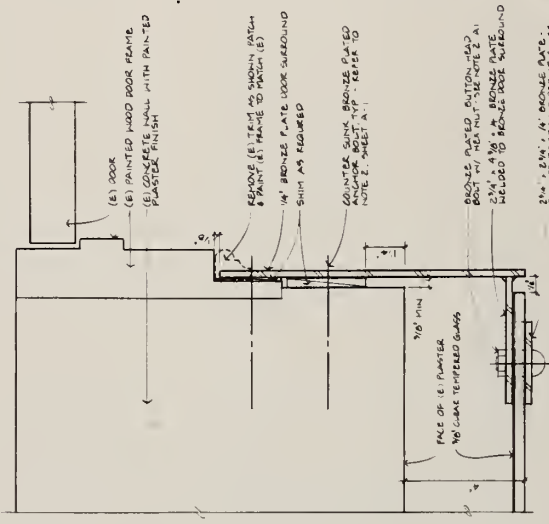
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DETAILS

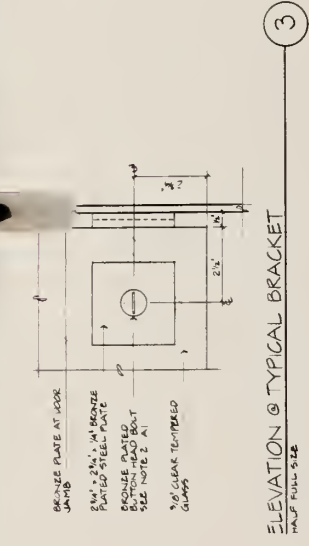
A3



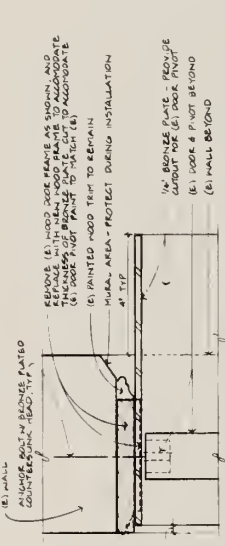
GLASS PANEL @ HINGED BRACKET
 HALF FULL SIZE



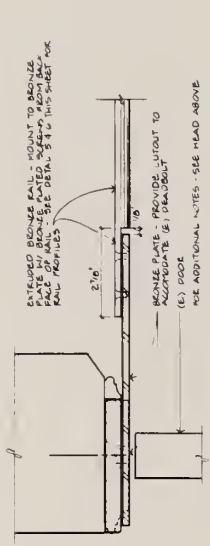
GLASS PANEL @ FIXED BRACKET
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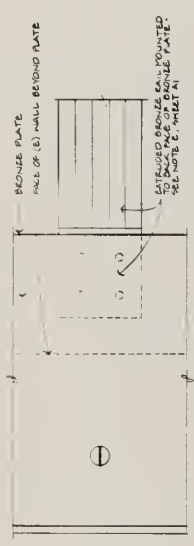
ELEVATION @ TYPICAL BRACKET
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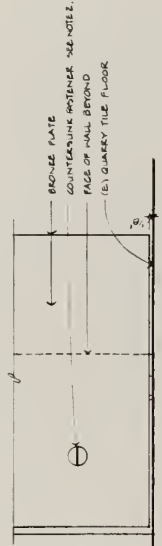
HEAD



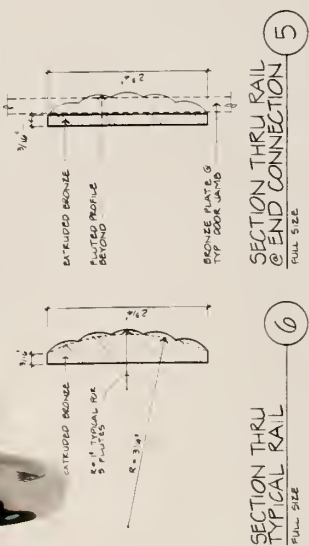
JAMB



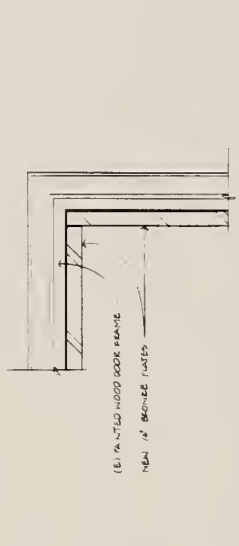
ELEVATION @ JAMB



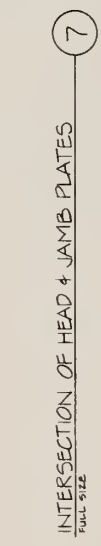
BASE
DETAILS @ DOOR SURROUND
 HALF FULL SIZE



SECTION THRU RAIL
 FULL SIZE



SECTION THRU RAIL @ END CONNECTION
 FULL SIZE



INTERSECTION OF HEAD & JAMB PLATES
 FULL SIZE



